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ABSTRACT

The purpose of the handbook is to provide teachers of middle school students a resource for integrating career education into subject area disciplines. Written by a committee of educators from the Pacific area Department of Defense Schools during a summer workshop, the document provides a job cluster wheel of fifteen clusters (office occupations, personal services, public service, transportation, health occupations, agri-business and natural resources, fine arts and humanities, communications and media, marine science, construction, consumer and homemaking occupations, environment, hospitality and recreation, manufacturing, and marketing and distribution). The clusters are further refined in outline form, including jobs at all levels. In studying the clusters, students will become able to: identify various occupations, identify skills and talents of workers, observe how occupations affect life style, relate products and services with worker interaction, recognize that environments affect job location, and ascertain how a worker gains dignity and satisfaction from a job well done. Suggestions for roles of school personnel and the use of field trips, guest speakers, and media are included. The major portion of the document is devoted to specific activities in twelve disciplines, based on the clusters and objectives mentioned, which teachers can employ in the classroom (AG)

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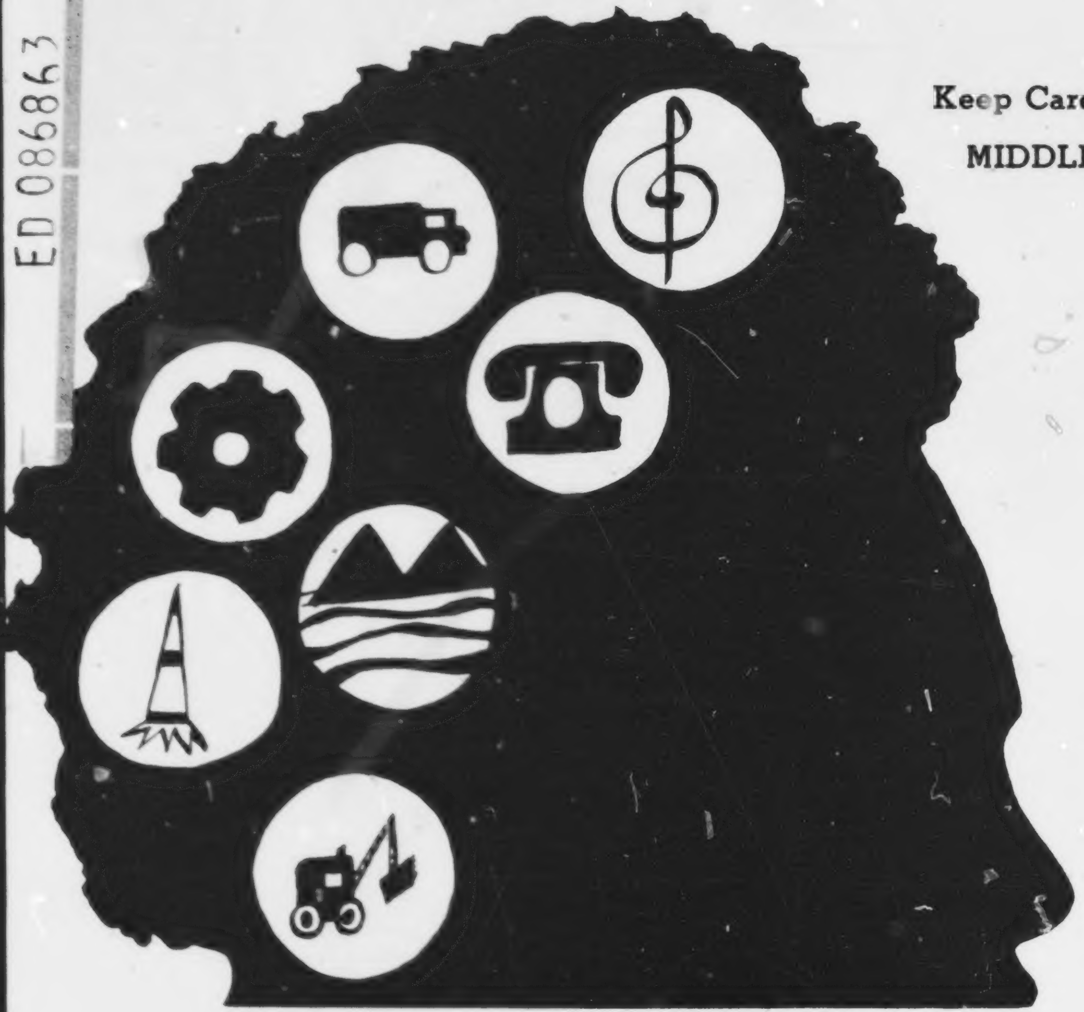
Keep Careers in Mind

MIDDLE SCHOOL



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KEEP CAREERS IN MIND

MIDDLE SCHOOL CAREER EDUCATION

PACIFIC AREA

DEPARTMENT OF DEFENSE SCHOOLS

EDWARD C. KILLIN
DIRECTOR

SEPTEMBER 1973

FOREWORD

One of the most important educational phenomena in our time has been the growing national interest in, and development of programs, in career education. The Pacific Area Dependents Schools have kept pace with this development. Throughout the Pacific area many career education programs can be found in our elementary, middle and high schools.

The main thrust of career education is to prepare all students for a successful life role by increasing their opportunities for occupational choice by eliminating barriers - real and imagined, attaining job skills, and by enhancing learning achievement in all subject areas at all levels of education.

The middle school career education program exposes students to the full range of occupational opportunities and allows them to explore career interests of their choice. The purpose of this handbook is to provide a resource to teachers for intergrating career education into subject area disciplines in order to reveal to students the broad range of career possibilities.

Future program development will be directed towards providing opportunities to students to explore selective career clusters of interest to them.

EDWARD C. KILLIN
DIRECTOR
DOD DEPENDENTS SCHOOLS

ACKNOWLEDGMENTS

MIDDLE SCHOOL

CAREER EDUCATION HANDBOOK

1. This handbook is designed for professional personnel concerned with middle school education in DOD Dependents Schools in the Pacific area. It is designed for use by teachers in all educational programs.

2. This handbook was written during a summer workshop by a committee of educators representative of the Pacific area schools.

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4. The following school districts and State Departments of Education have granted the Pacific area DOD schools permission to reproduce selected portions of handbooks and curriculum guides to be utilized in this project:

Las Animas School District No. RE-1, Las Animas, Colorado
Delaware's Occupational Vocational Education Model, Milford, Delaware
The Public School System of Gary, Indiana
Comprehensive Career Education Model, Pontiac, Michigan
Research and Educational Planning Center College of Education, Reno, Nevada
Tulsa Public Schools, Tulsa, Oklahoma
Pittsburg Public Schools, Pittsburgh, Pennsylvania
Public School Department, Pawtucket, Rhode Island
San Antonio Independent School District, San Antonio, Texas
Unified School District Number 1, Racine, Wisconsin
Puyallup Public Schools, Puyallup, Washington

State Department of Education, Sacramento, California
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CONTENTS

PURPOSE 1

TO THE TEACHER 2

CAREER CLUSTERS 4

CLUSTER WHEEL 5

- Manufacturing 6
- Marine Science 8
- Marketing and Distribution 12
- Business 15
- Personal Service 18
- Public Service 21
- Transportation 27
- Agri-Business and Natural Resources 29
- Communication and Media 34
- Construction 37
- Consumer and Homemaking 38
- Environment 42
- Fine Arts and Humanities 47
- Health 49
- Recreation and Hospitality 54

ROLES OF SCHOOL PERSONNEL 55

DEFINITION OF TERMS 58

GUIDELINES FOR FIELD TRIPS 59
GUIDELINES FOR GUEST SPEAKER 60
RESOURCES OR RESOURCE PERSONS 60
MEDIA CENTER 61
RELATING SCHOOL SUBJECTS TO CAREERS 62
CAREER EDUCATION CONCEPTS 62
INTEGRATION OF SUBJECT MATTER 64
SPECIFIC DISCIPLINE ACTIVITIES 65
- Art 66
- Business Education 74
- Foreign Languages 81
- Home Economics 96
- Industrial Arts 102
- Language Arts 120
- Mathematics 153
- Multi-Cultural Society 165
- Music 171
- Physical Education 175
- Science 179
- Social Studies 189

HODGE-PODGE SECTION 224

SMALL GROUP FIELD TRIPS 281

  Survey Questions 282

  Field Trip Evaluation 284

  Field Trip Report 287

  Multi-Cultural Questionnaire 288

PURPOSE

The purpose of the Middle School Career Education Handbook is to provide teachers, administrators, and specialists in the Pacific Area Department of Defense Schools with a practical program concerning career education. It is designed to be used as a flexible tool with suggested activities included to make career education an integral part of every area of study throughout the school year. The pages in this book may be removed for duplication or revisions.

TO THE TEACHER

The Career Education Program is attempting to make students and teachers aware of the change of education in the American school systems. Students are no longer content with teacher presentation of subject matter just for the sake of general knowledge. The student of today is asking, "How will this help me now and later? How will this help me get a job?" Students are asking for relevancy of instruction to the working world in which they are or will be involved.

Most students have no realization what work and the real world entail. They are in school with the "promise" that the school will prepare them for obtaining and holding a job. Statistics of school dropouts, however, and students not being able to cope with their responsibilities, even after college, indicate the schools are not effective enough in preparing students for a career.

It is with this in mind that teachers must implement ideas within their own areas of instruction. Classrooms should not be four-walled structures where boredom is enrooted but an environment where concepts are born and developed. Many concepts and activities have been developed that the teacher may utilize to create an atmosphere of desire to learn. Hopefully these ideas will be used to motivate students to realize that their education is relevant to the working world.

* * * *

AWARENESS

The goal of Career Education at the elementary level is to make students aware of the world of work.

EXPLORATION

Middle School Career Education is exploratory in nature and begins to relate studies to careers.

PREPARATION

By offering integrative and discreet courses, Secondary Career Education prepares students for their career choices.

* * * *

At the Middle School level our objectives in Career Education are:

1. To help students get realistic career goals in light of knowledge about themselves.
2. To relate that technology affects the number and types of jobs and to illustrate the interdependency of workers.
3. To understand goals, values, and aspirations and how they relate to the choice of a career.
4. To expose students to a full range of occupational opportunities. Over 21,000 job opportunities have been categorized into fifteen career clusters.

CLUSTER DEFINITIONS AND OCCUPATIONS

An Organizational Technique to Facilitate The Delivery of Career Education

In a middle school career education program, we wish to foster an exploration into the wide range of opportunities in the World of Work. An understanding of the full scope of vocational possibilities is vital if the student is to set realistic goals for himself.

Providing comprehensive career information is difficult because of the complexity and diversity of the American economy. Dealing with each of the thousands of individual jobs available would be impossible. Therefore, the U. S. Office of Education has developed a cluster scheme.

Each cluster includes jobs at all levels: entry-level, skilled, technical, and professional. Thus, the cluster scheme should aid the teacher in stressing the importance of every job. This approach should help the student realize that all workers in one cluster, for example Health Occupations, are working together toward a common goal. The orderly, the lab technician, and the doctor each must do his job well so that the goal of good health may be attained.

Included are the career cluster wheel and a brief outline of each cluster with categories representing occupations found in each cluster. These lists of occupations are far from complete.* They merely suggest some representative fields of employment. Each teacher and class can add to the lists and adapt them to the local environment.

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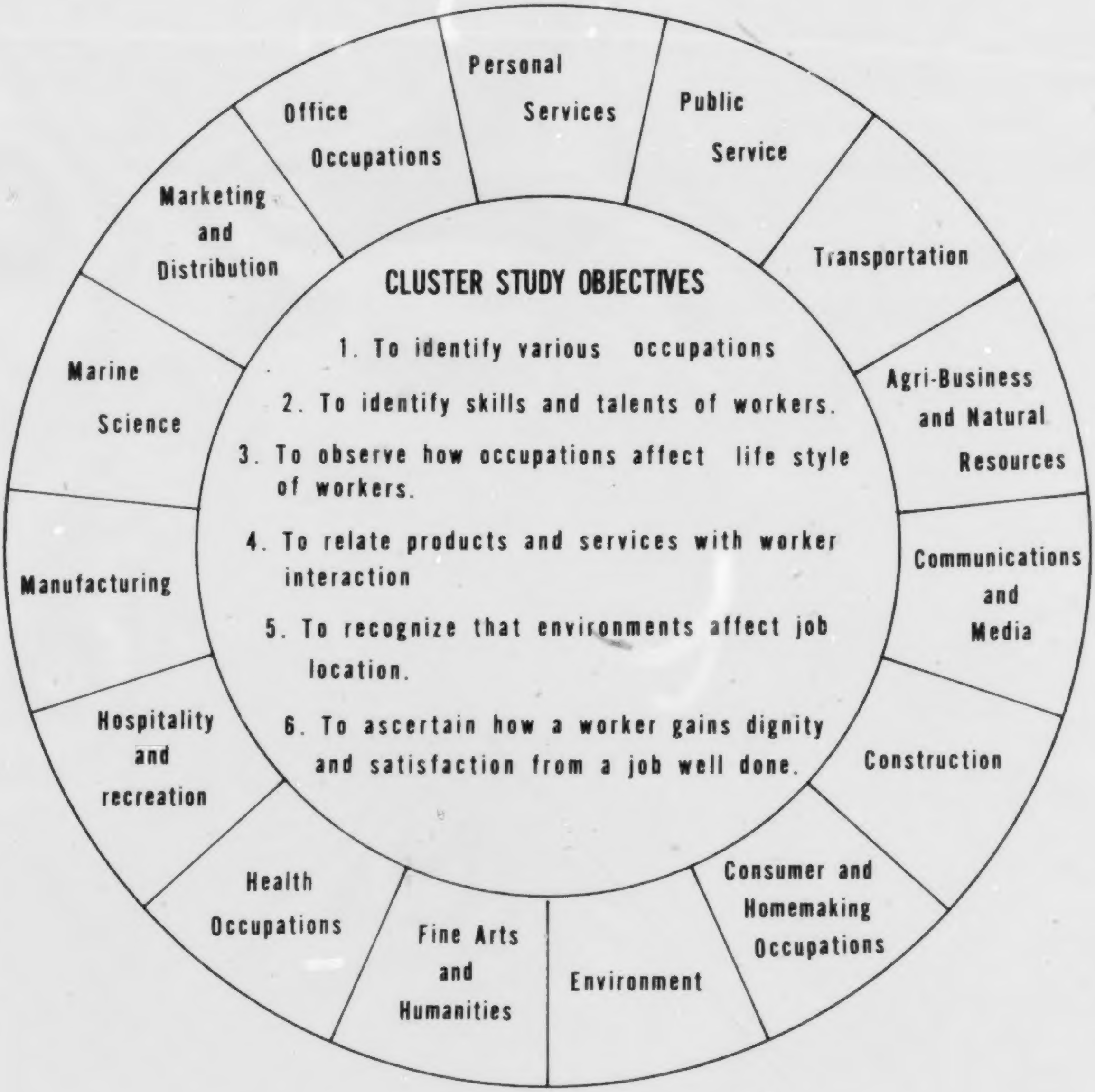
* A further break-down may be found in the K-12 Handbook.



CLUSTER STUDY OBJECTIVES

1. To identify various occupations
2. To identify skills and talents of workers.
3. To observe how occupations affect life style of workers.
4. To relate products and services with worker interaction
5. To recognize that environments affect job location.
6. To ascertain how a worker gains dignity and satisfaction from a job well done.

Office Occupations
Personal Services
Public Service
Transportation
Agri-Business and Natural Resources
Communications and Media
Construction
Consumer and Homemaking Occupations
Environment
Fine Arts and Humanities
Health Occupations
Hospitality and recreation
Manufacturing
Marine Science
Marketing and Distribution

I. MANUFACTURING

A. Operations
  1. Management
    a. Planning and Policy Administration
    b. Data Interpretation
    c. Personnel and Labor Relations
    d. Communications
  2. Mid-management
    a. Operations Techniques
    b. Data Handling
    c. Task Analysis
    d. Communications Skills
  3. Supervision
    a. Operational Procedures
    b. Processing Techniques
    c. Personnel Relations
    d. Communication Skills
  4. Personnel
    a. Personnel Practices
    b. Communication Skills
    c. Skill Development
    d. Career Orientation

B. Design
  1. Product
    a. Model Development
    b. Prototype Testing
    c. Packaging
  2. Process
    a. Component/Material Flow Systems
    b. Assembly Line Systems
    c. Cybernetics
  3. Equipment
    a. Foundry Operations
    b. Electromechanical Systems
    c. Machine Operations

C. Materials
  1. Natural
    a. Animal Sources
    b. Vegetable Sources
    c. Mineral Sources
  2. Synthetic
    a. Mineral Derivatives
    b. Vegetable Derivatives
    c. Extractive Processes

3. Receiving
    a. Materials Handling
    b. Transportation and Storage
4. Waste Output
    a. Disposal Operations
    b. Recycling Operations

D. Production
    1. Processing
        a. Assembly Line Operations
        b. Material Flow Operations
        c. Automation
    2. Quality Control
        a. Component/Materials Inspection
        b. Processing Inspection
        c. Product Inspection

E. Distribution
    1. Packaging
        a. Packaging Development
        b. Packaging Manufacturing
    2. Marketing
        a. Retailing
        b. Wholesaling
        c. Distribution
    3. Advertising
        a. Product Promotion
    4. Transportation
        a. Air
        b. Truck
        c. Rail
        d. Pipeline
        e. Vessel
    5. Warehousing
        a. Packing
        b. Storing/Inventory

F. Research
    1. Product
        a. Design
        b. Materials
        c. Utilization
    2. Process
        a. Production Processes
        b. Quality Control
    3. Marketing
        a. Consumer Research
        b. Product Promotion Research

II. MARINE SCIENCE OCCUPATIONS

- A. Operations
  - 1. Management
    - a. Planning and Policy Administration
    - b. Communications
    - c. Communications
  - 2. Mid-management
    - a. Task Analysis
    - b. Data Handling
    - c. Communications
  - 3. Supervision
    - a. Processing Techniques
    - b. Personnel Relations
    - c. Communications
  - 4. Personnel
    - a. Personnel Relations
    - b. Operational Procedures
    - c. Communications

- B. Marine Biology
  - 1. Marine Micro-biological Research
    - a. Boat or Vessel Operation
    - b. Water Sampling
    - c. Bacterial Culture
    - d. Micro-organism life cycle
  - 2. Marine Animal (zoological) Research
    - a. Specimen Dissection
    - b. Food Sources
    - c. Diseases, Parasites and Enemies of Species
    - d. Meterological Fish Finding
  - 3. Marine Plant Research
    - a. Nutrient Sources and Cycles for Species
    - b. Sedimentation
    - c. Turbidity
    - d. Sunlight Effects on Marine Plant Life
  - 4. Marine Biology Laboratory Management
    - a. Acquisition of Facilities and Equipment
    - b. Chemical Laboratory Services
    - c. Specimen Storage
    - d. Shipping Services
  - 5. Marine Ecology Research
    - a. Marine Plant and Animal Relationship Studies
    - b. Temperature Effects on Marine Life
    - c. Effects of Commercial Fishing on Marine Life Systems
    - d. Affects of Light on Marine Science

C. Commercial Fishing
  1. Ocean Fishing
    a. Offshore Fishing Vessel Operation
    b. Trawler and Dragger Operation
    c. Seine, Net, Trap and Gear Making and Repair
    d. Stowing and Quality Control
  2. Sea Food Processing
    a. Product Cooking
    b. Product Packaging
    c. Product Marketing
    d. Bi-products Production (oil, meat, animal food, fertilizer, or shell)
  3. Seafood Inspection
    a. Checking for Legal Species and Size
    b. Analysis for Adult Strains
    c. Determination of Toxic Chemical Content
    d. Bacteriological Determination of Product Quality
  4. Seaweed Harvesting and Processing
    a. Seaweed Harvesting Vessel Operation
    b. Product Collecting, Sorting, and Cleaning
    c. Chemical or Pharmaceutical Compound Extraction
  5. Export Fishing Enterprizes
    a. Deepwater Party Boat Vessel Operation
    b. Gear and Lure Preparation and Maintenance
    c. Naviation, Neterological Communications and Fish Finding Systems
    d. Sanitation and Fish Cooling Systems

D. Aqua-Culture
  1. Marine Fish or Shellfish Culture Research
    a. Isolate Potentially Commercial Species
    b. Develop Physical Systems for Its Culture
    c. Develop Optimum Harvest Method
    d. Develop Hybreds or Superior Strains
  2. Marine Plant Grower
    a. Develop Physical System for Its Culture
    b. Develop Superior Strain
    c. Develop System for Controlling Production Cycle
    d. Harvest and Process for Market
  3. Fish Hatching Raising
    a. Capture or Acquire Fertile Adults of Species
    b. Collect, Fertilize, and Hatch Eggs
    c. Construct Hatching, Growing and Harvesting Facilities
    d. Provide Food, if in Artifical System

E. Marine Exploration
    1. Oceanographic Mapping and Charting
        a. Instrumentation Use and Repair
        b. Depth Sounding and Charting
        c. Bottom Sampling and Charting
        d. Oceanic topographical Map and Chart Production
    2. Ocean Mineral Exploration
        a. Photogrammetic or Air-borne Instrument Surveys
        b. Geological Interpretation of Undersea Topography
        c. Chemical Analysis of Water and Bottom Samples
        d. Underwater Drilling, Sampling and Seismographic Surveying
    3. Ocean Current and Water Research
        a. Water Sampling, Temperature, and Chemical Analysis
        b. Fixed or Free Floating Bouy Instrument Systems
        c. Aerial Photographic Monitoring
        d. Meterological and Seasonal Effects of Ocean Currents

F. Underwater Construction and Salvage
    1. Underwater Construction
        a. Underwater Rigging
        b. Underwater Welding, Cutting, Fastening and Assembly
        c. Submarine Piping and Pumping Systems
        d. Underwater Repair and Maintenance
    2. Underwater Salvage Demolition
        a. Salvage by Air Tank Floatation
        b. Salvage by Diving and Recovering
        c. Salvage Law and Regulation
        d. Underwater Demolition Device Design, Placement and Detoriation
    3. Offshore Mineral Production
        a. Drilling Tender Vessel Operation
        b. Offshore Drilling (Oil, Sulphur, Brine, Facility Construction)
        c. Offshore Drilling Operations
        d. Offshore Dredge Construction and Operation
        e. Construction of Offshore Piping Systems
        f. Offshore Pumping, Storage and Loading Systems
    4. Underwater Engineering Research
        a. Submarine Materials Testing and Development
        b. Underwater Anchoring and Stabilizing Systems
        c. Fixed Undersea Structures Design and Construction
        d. Underwater Repair and Maintenance
        e. Mobile Submersible Machine Design and Construction
        f. Submersible Machine Operation

5. Deepwater Diving and Life Support
    a. Diving Tender Boat Operation
    b. Diving Gear Use and Maintenance
    c. Gas and Air to Diver Delivery Systems
    d. Hardhat and Scuba Diving
    e. Submersibles, Bells, and Decompression Systems
    f. Communication Systems
    g. Physiological Monitoring, First Aid, and Lifesaving.

III. MARKETING AND DISTRIBUTION

- A. Operations
  - 1. Management
    - a. Planning and Policy Administration
    - b. Data Interpretation
    - c. Personnel and Labor Relations
    - d. Communications
  - 2. Mid-management
    - a. Operations Techniques
    - b. Data Handling
    - c. Task Analysis
    - d. Communication Skills
  - 3. Supervision
    - a. Operational Procedures
    - b. Processing Techniques
    - c. Personnel Relations
    - d. Communications Skills
  - 4. Personnel
    - a. Personnel Practices
    - b. Communication Skills
    - c. Skill Development
    - d. Career Orientation

- B. Marketing System
  - 1. Retail Trade
    - a. General Merchandise Group
    - b. Dealership and Franchises
    - c. Specialty Stores
    - d. Rental Operations
  - 2. Wholesale Trade
    - a. Merchant Wholesaling
    - b. Manufacturing
    - c. Merchandise Brokerage
    - d. Farm Products Assembly
    - e. Petroleum Plants and Terminals
  - 3. Service Trades
    - a. Lodging
    - b. Personal Services
    - c. Business Services
    - d. Auto and Miscellaneous Repair and Services
    - e. Travel, Recreation and Entertainment

4. Non-store Retailing
    a. Automatic Merchandising.
    b. Mail Order
    c. Direct Selling
5. International Trade
    a. Foreign Operations
    b. Exporting

C. Sales and Services
    1. Industrial Selling
        a. Production and Engineering
        b. Business Operations
    2. Trade Selling
        a. Retail Resale
        b. Wholesale Resale
        c. Home and Institutional Resale
    3. Consumer Selling
        a. Apparel, Accessories and Personal Care
        b. Hardware, Materials Equipment
        c. Housing, Property and Household Products
        d. Food Products and Services
        e. Automotive, Transportation and Petroleum Products
        f. Intangibles

D. Buying
    1. Industrial Purchasing
        a. Purchasing Procedures
        b. Vendor Relations
    2. Buying for Resale
        a. Buying Offices
        b. Chain Operations
        c. Independent Operations
    3. Procurement
        a. Bid Advertisement
        b. Direct Negotiation

E. Sales Promotion
    1. Advertising
        a. Media
        b. Organizations

2. Display
    a. Display Houses
    b. Windows and Interiors
3. Public Relations
    a. Customer and Community Services
    b. Trade Relations
    c. Publicity

F. Physical Distribution
    1. Product Transport
        a. Carriers
        b. Traffic
        c. Shipping and Delivery
    2. Storage
        a. Warehousing
        b. Inventory Control
    3. Materials Handling
        a. Receiving and Marketing
        b. Assembling and Packing

G. Marketing Services
    1. Finance
        a. Banking Institutions
        b. Exchanges
    2. Credit
        a. Consumer Credit
        b. Commercial Credit
    3. Insurance
        a. Personal Insurance
        b. Business and Property Insurance
    4. Research
        a. Marketing Information
        b. Product Analysis and Development

IV. BUSINESS AND OFFICE OCCUPATIONS

A. Operations
    1. Management
        a. Planning and Policy Administration
        b. Data Interpretation
        c. Personnel and Labor Relations
        d. Communications
    2. Mid-Management
        a. Operations Techniques
        b. Data Handling
        c. Task Analysis
        d. Communication Skills
    3. Supervision
        a. Operational Procedures
        b. Processing Techniques
        c. Personnel Relations
        d. Communication Skills
    4. Personnel
        a. Personnel Practices
        b. Communication Skills
        c. Skill Development
        d. Career Orientation

B. Record Systems and Control
    1. Accountant
        a. Financial Reporting
        b. Costs Analysis
        c. Auditing
        d. Tax Analysis
    2. Bookkeeper
        a. Record Information
        b. Reporting
        c. Data Transfer
    3. Systems Analysts
        a. Analyze
        b. Design
        c. Summarize
    4. Computer Programmer
        a. Interpretation
        b. Analyze
        c. Diagram
        d. Language Conversion

5. Computer Operator
    a. Interpretation
    b. Assimilation
    c. Monitoring
    d. Editing

C. Secretarial
  1. Secretary
    a. Information Processing
    b. Scheduling and Reporting
    c. Records Control
    d. Public Relations
  2. Secretary Specialist (Executive, Legal, Medical)
    a. Information Processing
    b. Records Control
    c. Public Relations
    d. Administrative Activity
  3. Stenographer
    a. Correspondence
    b. Information Recording
    c. Information Distribution

D. Clerical
  1. General Office Clerk
    a. Report and Record Compilation
    b. Typing Activity
    c. Office Machine Operation
    d. Cash Receiving and Distribution
  2. Clerk Typist
    a. Typing Activity
    b. Record and Report File Control
  3. Machine Transcriber
    a. Correspondence
    b. Information Recording
    c. Information Distribution
  4. Office Machine Operator
    a. Record Information
    b. Reproduce Information
    c. Data Calculation
    d. Store and Retrieve Information

E. Administrative
  1. Office Supervisor
    a. Interpret
    b. Instruct
    c. Coordinate and Monitor
    d. Evaluation

F. Business Ownership
  1. Entrepreneurship
    a. Dealership Operation
    b. Franchise Operation
    c. Independent Operation
    d. Partnership
  2. Corporation
    a. Dealership Operation
    b. Franchise Operation

V. PERSONAL SERVICE OCCUPATIONS

- A. Household Pet Services
  - 1. Grooming and Specialized Care
    - a. Shampooing Animals
    - b. Styling, Clipping, and Manicuring Services
    - c. Exercising
    - d. Counseling Services on Animals
    - e. Mortuary Care of Animals
  - 2. Boarding and Hospital Services
    - a. Providing Physical Care of Animals
    - b. Nurturing
    - c. Exercising
    - d. Treating of Ill Animals
  - 3. Obedience Training
    - a. Screening and Selecting of Animals
    - b. Programing and Training
    - c. Placing and Supervising
    - d. Evaluating Performance
    - e. Sales
  - 4. Entrepreneurship
    - a. Establishing and Operating Pet Shop
    - b. Establishing, Equipping, and Operating Grooming Center or Kennel
    - c. Advertising and Sales
    - d. Analyzing and Managing of Finances and Records
    - e. Custodial Operations and Maintenance of Shop or Center or Kennel

- B. Cosmetology
  - 1. General Customer Care and Special Services
    - a. Shampooing
    - b. Hair Styling
    - c. Facial Treatment Operations
    - d. Manicuring
    - e. Scalp and Skin Treatment
    - f. Styling and Restoration of Hairpieces
    - g. Maintenance of Tools, Equipment and Supplies
  - 2. Theatrical and Television Make-up
    - a. Characterization Analysis
    - b. Selecting and Application of Make-up for Specific Medium
    - c. Make-up Technology
    - d. Maintaning Products and Supplies

2. Entrepreneurship
    a. Establishing and Equipping a Shop
    b. Owning and Operating Establishment
    c. Analyzing and Managing of Finances and Records
    d. Advertising and Sales Custodial Operation and Maintenance of Shop

E. Physical Culture
    1. Consultation and Services on Human Weight Control
        a. Analyzing and Counseling on Weight Problems
        b. Operating and Maintaining Reducing Studio Equipment
        c. Directing and Guidance of Physical Exercise Activities
    2. Massage and Related Services
        a. Analyzing, Counseling, and Massaging
        b. Programing of Individual Treatment
        c. Operating and Maintaining Massaging Equipment
    3. Entrepreneurship
        a. Establishing and Equipping Studio
        b. Owning and Operating Establishment
        c. Analyzing and Managing of Finances and Records
        d. Advertising and Sales
        e. Custodial Operation and Maintenance of Studio

F. Operations
    1. Management
        a. Planning and Policy Administration
        b. Data Interpretation
        c. Personnel and Labor Relations
        d. Communications
    2. Mid-Management
        a. Operations Techniques
        b. Data Handling
        c. Task Analysis
        d. Communication Skills
    3. Supervision
        a. Operational Procedures
        b. Processing Techniques
        c. Personnel Relations
        d. Communication Skills
    4. Personnel
        a. Personnel Practices
        b. Communication Skills
        c. Skill Development
        d. Career Orientation

3. Product Testing and Selectivity
    a. Color Testing of Products
    b. Purchasing of Cosmetics and Hairpieces
    c. Analyzing Products
    d. Demonstrating of Products and Sales
4. Entrepreneurship
    a. Establishing and Equipping Shop
    b. Owning and Operating Establishment
    c. Analyzing and Managing of Finances and Records
    d. Advertising and Sales
    e. Custodial Operation and Maintenance Shop

C. Mortuary Science
1. Mortuary Services and Personal Relation
    a. Embalming or Cremating
    b. Transporting
    c. Restoration Art Processes
    d. Pathological Examinations
    e. Assisting and Counseling Family Members
    f. Contractual Embalming and Restoration Art Treatment
2. Special Funeral Home Functions
    a. Planning and Arranging for Special Funeral Functions
    b. Transporting
    c. Ushering and Services
    d. Displays and Sales
3. Entrepreneurship
    a. Establishing and Equipping Funeral Homes
    b. Owning and Operating Establishment
    c. Analyzing and Managing of Finances
    d. Advertising and Sales
    e. Custodial Operation and Maintenance

D. Barbering
1. Customer Care and Special Services
    a. Shampooing
    b. Hair Styling
    c. Shaving and Facial Treatment
    d. Scalp and Skin Treatment Operations
    e. Styling and Restoration of Hairpieces

VI. PUBLIC SERVICE

- A. Operations
  - 1. Management
    - a. Planning and Policy Administration
    - b. Data Interpretation
    - c. Personnel and Labor Relations
    - d. Communications
  - 2. Mid-Management
    - a. Operations Techniques
    - b. Data Handling
    - c. Task Analysis
    - d. Communication Skills
  - 3. Supervision
    - a. Operational Procedures
    - b. Processing Techniques
    - c. Personnel Relations
    - d. Communication Skills
  - 4. Personnel
    - a. Personnel Practices
    - b. Communication Skills
    - c. Skill Development
    - d. Career Orientation

- B. Financial
  - 1. Revenue
    - a. Taxation
    - b. Bonds
    - c. Fees
  - 2. Disbursement
    - a. Salaries
    - b. Institutional Support

- C. Urban Development
  - 1. Planning & Engineering
    - a. Appraisal & Condemnation
    - b. Community Relations
    - c. Urban Renewal
    - d. Technical Assistance
  - 2. Construction
    - a. Inspection
    - b. Labor Relations
    - c. Buildings
    - d. Roads

3. Public Housing
    a. Coordination
    b. Property Management
    c. Recreation
4. Maintenance
    a. Service
    b. Supplies
    c. Construction & Heavy Equipment

D. Regulatory Services
1. Financial
    a. Credit Unions
    b. Banks
    c. Insurance
    d. Savings and Loans
    e. Stock Exchanges
2. Public Records
    a. Birth
    b. Marriage
    c. Death
    d. Titles and Deeds
3. Licensing
    a. Occupational
    b. Institutional
    c. Vehicular
4. Customs and Immigration
    a. Customs Inspection
    b. Immigration Inspection
    c. Plant & Animal Inspection
5. Facilities
    a. Construction
    b. Purchasing
    c. Maintenance

E. Education
1. Instruction
    a. Teaching
    b. Counseling
    c. Supervision
    d. Support Activities
2. Transportation
    a. Transport Service
    b. Maintenance

3. Extension Services
    a. Agricultural Services
    b. Consumer Services
    c. Homemaking Services

F. Police & Fire
    1. Technical Support
        a. Inspection
        b. Accident Prevention
        c. Special Services
    2. Law Enforcement
        a. Land, Air and Water Patrol
        b. Community Relations
    3. Communications
        a. Transmitting and Receiving
        b. Fixed and Mobile Stations
        c. Maintenance
        d. Services
    4. Maintenance
        a. Fire Equipment
        b. Police Equipment
        c. Electronic and Other Equipment

G. Defense
    1. Military
        a. Services
        b. Supply
        c. Research and Development
    2. Civil Defense
        a. Disaster Planning
        b. Emergency Operations and Control
        c. Early Warning

H. Post Office
    1. Marketing
        a. Sales
        b. Special Services
    2. Operations
        a. Processing
        b. Distribution

I. Public Utilities
    1. Water Systems

        - a. Water Supply
        - b. Refuse Systems
        - c. Installment and Maintenance
    - 2. Sanitary Service
        - a. Sewer Systems
        - b. Refuse Systems
        - c. Installation and Maintenance
    - 3. Electric Service
        - a. Generation
        - b. Distribution
        - c. Installations and Maintenance
    - 4. Gas Service
        - a. Manufacturing
        - b. Transmission
        - c. Service
    - 5. Steam Supply
        - a. Production
        - b. Distribution
        - c. Installation and Maintenance

J. Public Health
- 1. Institutional Care
    - a. Nursing Homes
    - b. Mental Hospitals
    - c. General Hospitals
- 2. Community Services
    - a. Out-Patient Clinics
    - b. Emergency Services
    - c. Community Health Centers
    - d. Home Health Care
- 3. Food and Drug
    - a. Sanitation
    - b. Meat and Other Foods
    - c. Drug Control
- 4. Research
    - a. Pollution Control
    - b. Communicable Disease Centers
    - c. Mental Health

K. Labor Affairs
- 1. Employment Services
    - a. Labor Market Survey
    - b. Employer Relations
    - c. Counseling and Testing
    - d. Placement

2. Employee Compensation
    a. Insurance
    b. Worker Compensation
3. Labor Standards
    a. Safety and Health
    b. Minimum Wage
    c. Safeguarding Special Groups

L. Highways
  1. Design and Construction
      a. Planning
      b. Land Acquisition
      c. Bridges and Tunnels
      d. Engineering and Inspection
      e. Road Repair
      f. Care of Rightway
      g. Landscaping
  2. Toll and Traffic Control
      a. Toll Collection
      b. Electronic and Electric Equipment
      c. Installation
      d. Maintenance

M. Public Transportation
  1. Land
      a. Rapid Transit
      b. Railroads
      c. Buses and Trucks
      d. Bridges and Tunnels
  2. Air
      a. Airports and Terminals
      b. Traffic Control
      c. Maintenance
  3. Water
      a. Inland Waterways Operation
      b. Design and Construction
      c. Maintenance
  4. Control
      a. Port Authorities
      b. Turnpike and Tollbridges
      c. Registration and Licensing
      d. Inspection

N. Social and Rehabilitation
    1. Children and Youth
        a. Child Care Assistance
        b. Foster Homes
        c. Youth Correction and Development
    2. Adult
        a. Assistance and Support to the Aging
        b. Vocational Rehabilitation
    3. Family
        a. Medical Social Assistance
        b. Family Support
        c. Community and Neighborhood Outreach
        d. Consumer Affairs

O. Courts and Corrections
    1. Courts
        a. Judicial Services
        b. Legal Services
        c. Court Services
        d. Probationary Services
    2. Penal Institutions
        a. Security
        b. Prison Industries
        c. Education and Related Activities

P. Parks and Recreation
    1. Development
        a. Planning
        b. Design and Construction
        c. Operation
    2. Services
        a. Amusement
        b. Recreation
        c. Lodging
    3. Maintenance
        a. Conservation
        b. Grounds and Camps
        c. Trails

VII. TRANSPORTATION

- A. Operations
  - 1. Management
    - a. Planning and Policy administration
    - b. Data Interpretation
    - c. Personnel and Labor Relations
  - 2. Mid-management
    - a. Operations Techniques
    - b. Data Handling
    - c. Task Analysis
  - 3. Supervision
    - a. Operations Procedures
    - b. Processing Techniques
    - c. Personnel Relations
  - 4. Personnel
    - a. Personnel Practices
    - b. Skill Development
    - c. Career Orientation

- B. Land Transportation
  - 1. Local and Surburban Transit
    - a. Vehicle Operation
    - b. Agents and Clerk
    - c. Security and Inspection
    - d. Dispatching Systems
  - 2. Highway Transportation
    - a. Vehicle Operation
    - b. Agents and Clerks
    - c. Freight Handlers
    - d. Estimating
  - 3. Rail Transportation
    - a. Passenger Service
    - b. Freight Service
    - c. Operators
    - d. Agents and Clerks

- C. Aerospace Transportation
  - 1. Commercial Aviation
    - a. Flight Crew
    - b. Aircraft Maintenance
    - c. Passenger Services
    - d. Freight Services
  - 2. General Aviation
    - a. Flight Crew
    - b. Ground Support Activities
    - c. Aircraft Maintenance
    - d. Airport Facilities Operations

3. Spacecraft Transportation
    a. Air to Surface
    b. Air to Air (Space Station)
    c. Surface to Air
    d. Launch and Landing Operations

D. Pipeline Transmission
  1. Liquid and Gas Transmission
    a. Petroleum and Natural Gas Transmission
    b. Pipeline and Tank Farm Operation and Maintenance
  2. Solid Transmission
    a. Slurry and Coal Transmission
    b. Pipeline and Tanking Operations-and Maintenance

E. Water Transportation
  1. Inland Water Transportation
    a. Riverboat and Barge Operation
    b. Engineer and Steward Departments
    c. Merchant Marine
    d. Piloting
  2. Ocean Water Transportation
    a. Ocean and intracoastal vessel
    b. Operations
    c. Engineer and Steward Departments
    d. Piloting

VIII. AGRI-BUSINESS AND NATURAL RESOURCES

A. Operations
  1. Management
    a. Planning and Policy Administration
    b. Data Interpretation
    c. Personnel and Labor Relations
    d. Communications
  2. Mid-management
    a. Operations Techniques
    b. Data Handling
    c. Task Analysis
    d. Communication Skills
  3. Supervision
    a. Operational Procedures
    b. Processing Techniques
    c. Personnel Relations
    d. Communication Skills
  4. Personnel
    a. Personnel Practices
    b. Communication Skills
    c. Skill Development
    d. Career Orientation

B. Support and Regulations
  1. Guardianships
    a. Indians
    b. Eskimos
    c. Trust Territories
  2. Safety and Regulations
    a. Federal
    b. State
  3. Conservation
    a. Soil
    b. Minerals and Petroleum
    c. Fish and Wildlife
    d. Water

C. Research
  1. Experimentation
    a. Timber
    b. Wildlife and Fish
    c. Minerals and Petroleum
    d. Water and Soil

2. Water
    a. Pollution Control
    b. Quality Control
    c. Transportation
    d. Desalinization
3. Dissemination
    a. Reports and Visual Aids
    b. News Media

D. Service
  1. Supply
      a. Machinery
      b. Seed and Feed
      c. Chemicals
      d. Veterinary
  2. Business
      a. Finance
      b. Insurance
      c. Contracting
      d. Management

E. Processing and Marketing
  1. Selecting and Purchasing
      a. Inspection
      b. Grading
      c. Transportation
  2. Processing
      a. Food
      b. Fiber
      c. By-Products
  3. Distribution
      a. Cooperatives
      b. Packaging
      c. Storage
      d. Transportation

F. Support and Regulations
  1. Inspection and Regulatory
      a. Federal
      b. State
      c. Local

    2. Government Programs

- G. Research
    - 1. Experimentation
        - a. Crop Production
        - b. Animal Production
        - c. Food and Fiber Processing
    - 2. Dissemination
        - a. Preparation of Reports and Visual Materials
        - b. Federal Extension Service
        - c. News Media

- H. Production
    - 1. Crops
        - a. Planting
        - b. Cultivating
        - c. Harvesting
    - 2. Animals and Fish
        - a. Breeding
        - b. Raising
        - c. Feeding
        - d. Management
    - 3. Horticultural Products
        - a. Propagating
        - b. Cultivating
        - c. Harvesting
        - d. Landscaping

- I. Petroleum and Related Products
    - 1. Exploration
        - a. Prospect Drilling
        - b. Geophysical
        - c. Seismographic
        - d. Photo-grammetric
    - 2. Production
        - a. Drilling
        - b. Construction and Maintenance
        - c. Extraction
        - d. Waste Disposal
        - e. Storage
    - 3. Services
        - a. Contract
        - b. Management Facilities and Equipment
        - c. Supplies

4. Distribution
   a. Marketing
   b. Transportation

J. Mining and Quarrying
   1. Exploration
      a. Geological
      b. Geophysical
      c. Seismographic
      d. Photo-grammetric
   2. Production
      a. Excavation
      b. Extraction
      c. Transportation
      d. Mining-benefication
   3. Processing and Storage
      a. Smelting
      b. Milling
      c. Refining
      d. By-products
   4. Distribution
      a. Marketing
      b. Transportation

K. Fisheries and Wildlife
   1. Management
      a. Propagation
      b. Protection
      c. Controlled Use
   2. Production
      a. Fish Farms
      b. Game Preserves
      c. Wilderness Areas
      d. Conversation
   3. Utilization
      a. Commercial Fisheries
      b. Recreation
      c. Hunting and Trapping

L. Forestry
   1. Production
      a. Propagation
      b. Management

2. Services
    a. Business and Finance
    b. Contract
    c. Supplies
3. Conservation
    a. Fire Control
    b. Planting and Thinning
    c. Disease and Pest Control
4. Processing and Marketing
    a. Logging
    b. Saw Mill Operation
    c. Pulpwood Manufacture
    d. Transportation

M. Land and Water Management
1. Parks
    a. State
    b. National
    c. Private
2. Inland Waterways
    a. Pollution Control
    b. Commerce
    c. Recreation
    d. Commercial Fisheries
3. Hydro-Electric Power
    a. Federal
    b. State
    c. Private

IX. COMMUNICATION AND MEDIA

A. Operations
  1. Management
    a. Planning and Policy Administration
    b. Data Interpretation
    c. Personnel and Labor Relations
    d. Communications
  2. Mid-management
    a. Operations Techniques
    b. Data Handling
    c. Task Analysis
    d. Communication Skills
  3. Supervision
    a. Operational Procedures
    b. Processing Techniques
    c. Personnel Relations
    d. Communication Skills
  4. Personnel
    a. Personnel Practices
    b. Communication Skills
    c. Skill Development
    d. Career Orientation

B. Audio/Visual
  1. Photographic Reproduction
    a. Lithography, Photography and Plate Making
    b. Photo Engraving
    c. Commercial Photography
    d. Photographic Laboratory and Darkroom Processes
  2. Recordings
    a. Industrial Electronics Systems
    b. Audio Systems

C. Language
  1. Signs/Symbols, Design, Production
    a. Sign Painting
    b. Drafting/Illustrating
    c. Advertising
    d. Servicing/Fabrication
  2. Equipment Design Production
    a. Research and Development

D. Publishing
    1. Graphic Arts
        a. Printing Processes
        b. Silk Screen Making and Printing
        c. Bookbinding
    2. Journalism
        a. Creative Writing
        b. Reporting
        c. Editing
        d. Publication
    3. Commercial Art
        a. Illustration
        b. Animation
        c. Layout Processes

E. Broadcasting
    1. Radio/Television
        a. Electronics and Electromechanical Systems
        b. Instrumentation
        c. Radio and T. V. Servicing
        d. Broadcasting
    2. Satellite Transmission
        a. Electronics and Electromechanical Systems
        b. Micro Wave Systems
        c. International Communications
        d. Federal Communications
    3. Laser Transmission
        a. Electronics Systems
        b. Optics
        c. Space Communications

F. Line Communications
    1. Data Transmission
        a. Systems
        b. Programming
        c. Computer and Console Operations
        d. Peripheral Equipment Operations
    2. Telegraph
        a. Communications Systems Operations
        b. Line Serving
        c. Installing and Maintenance

3. Telephone
    a. Information Communications
    b. Central Office Equipment
    c. Installation and Maintenance
    d. Line and Cable Splicing

X. CONSTRUCTION

- A. Land Development
  - 1. Site Preparation
    - a. Site Layout
    - b. Earth Moving Operations
  - 2. Utilities
    - a. Communications
    - b. Gas and Electric
    - c. Water
    - d. Sewer
    - e. Storm Drainage
- B. Fabrication and Installation
  - 1. Field Operations
    - a. Foundation Work
    - b. Structural Work
    - c. Finishing Operations
    - d. Prefabrication
  - 2. Building Systems
    - a. Prefabrication
    - b. Field Assembly
  - 3. Materials Fabrication
    - a. Materials Testing
    - b. Forming and Shaping

XI. CONSUMER AND HOMEMAKING - RELATED OCCUPATIONS

- A. Operations
  - 1. Management
    - a. Planning and Policy Administration
    - b. Data Interpretation
    - c. Personnel and Labor Relations
    - d. Communications
  - 2. Mid-management
    - a. Operations Techniques
    - b. Data Handling
    - c. Task Analysis
    - d. Communication Skills
  - 3. Supervision
    - a. Operational Procedures
    - b. Processing Techniques
    - c. Personnel Relations
    - d. Communication Skills
  - 4. Personnel
    - a. Personnel Practices
    - b. Communication Skills
    - c. Skill Development
    - d. Career Orientation

- B. Child Care, Guidance and Teaching
  - 1. Family Child Care Homes
    - a. Caring for Physical Needs of Child
    - b. Protecting the Child
    - c. Guiding and Teaching Child
    - d. Adjusting Household to Meeting Needs of Child
  - 2. Institutional Child Care Services
    - a. Providing Physical Care of Children
    - b. Nurturing and Guidance of Children
    - c. Planning and Adapting Programs to Children with Varying Needs
    - d. Teaching of Children
  - 3. Community Child Care and Guidance Services
    - a. Planning and Scheduling for Children's Activities
    - b. Directing Children's Activities
    - c. Supervision of Children
    - d. Operating, Management and Supervision

C. Family and Community Services
    1. Public Housing
        a. Home Management and Family Counseling
        b. Housekeeping and Household Maintenance
        c. Consumer Counseling
    2. Social Welfare
        a. Assisting Welfare Agency
        b. Family Planning Counseling
        c. Consumer Counseling
        d. Assisting the Aging

D. Institutional Household Maintenance Services
    1. Household Maintenance
        a. Floors, Walls, Window Maintenance
        b. Maintenance and Care of Furnishings and Household Equipment
        c. Selecting Equipment and Supplies
    2. Institutional Maintenance
        a. Floor and Wall Maintenance
        b. Window Maintenance
        c. Furnishings and Equipment Maintenance
        d. Checking and Inspection
    3. Product Testing
        a. Analysis of Market for Cleaning Supplies and Equipment
        b. Comparative Testing
        c. Evaluation of Results
        d. Communicating Recommendations

E. Housing Design Interior Decoration
    1. Design and Decoration
        a. House Designing and Planning
        b. Interior Decorating
        c. Counseling on House Design and Decoration
    2. Furnishings Selectivity
        a. Selection of Paints and Finishes
        b. Selection and Construction of Draperies, Slipcovers
        c. Selecting and Combining Home Accessories
        d. Selection of Household Equipment
    3. Refurbishing and Refinishing
        a. Upholstering
        b. Refinishing Furniture
        c. Canning
        d. Repairing Furniture

4. Product Testing
   a. Serviceability Testing of Furnishings
   b. Comparative Testing of Household Equipment
   c. Counseling on Home Furnishings and Equipment
   d. Demonstration on Home Furnishings and Equipment

F. Interchangeable Technician for Homemaking
   1. Home Management
      a. Identifying Family Goals, Values and Standards
      b. Decision Making
      c. Identifying and Planning of Household Tasks
      d. Developing Homemaking Skills
   2. Consumerism
      a. Assessment of Needs
      b. Decision Making and Utilization of Resources
      c. Purchasing
      d. Utilization of Product
   3. Personal Family Relationships
      a. Assessment of Individual and Family Needs
      b. Identifying Individual and Family Goals, Values and Standards
      c. Developing Relationship and Problem Solving Skills
      d. Nurturing of Family Members Communication

G. Food Service Industry
   1. Production and Management
      a. Menu Planning and Controlling Cost
      b. Food Purchasing
      c. Quantity Food Preparation
      d. Equipment Care and Maintenance
   2. Service and Delivery
      a. Counter Attending
      b. Serving Food
      c. Packaging Food
      d. Delivery of Food
   3. Testing and Product Development
      a. Developing Recipes
      b. Experimental Testing of Food
      c. Evaluating Food Product
      d. Food Demonstration
   4. Nutrition
      a. Analysis of Dietary Needs
      b. Menu Planning in Relation to Dietary Needs
      c. Counseling Nutritional Needs
      d. Teaching Nutrition

H. Clothing, Apparel, and Textile Industry

1. Production and Management
    a. Assembling
    b. Trimming and Finishing
    c. Pressing
    d. Inspecting and Checking
2. Design
    a. Creating and Designing Garmets
    b. Patternmaking
    c. Grading Pattern
3. Clothing Alteration and Maintenance
    a. Laundering
    b. Dry Cleaning
    c. Repairing
    d. Alteration
4. Product Development
    a. Developing New Design and Product
    b. Experimental Testing
    c. Evaluation
    d. Demonstrating Design or Product

XII. ENVIRONMENT

A. Operations
  1. Management
    a. Planning and Policy Administration
    b. Data Inerpretation
    c. Personnel and Labor Relations
    d. Communications
  2. Mid-management
    a. Operations Techniques
    b. Data Handling
    c. Task Analysis
    d. Communication Skills
  3. Supervision
    a. Operational Procedures
    b. Processing Techniques
    c. Personnel Relations
    d. Communication Skills
  4. Personnel
    a. Personnel Practices
    b. Communication Skills
    c. Skill Development
    d. Career Orientation

B. Soil and Mineral Conservation and Control
  1. Research and Experimentation
    a. Hydroponic Plant Culture Development
    b. Soil or Surface Stabilization and Erosion Resistance Systems Development
    c. Reduction of Total Water Required for Plant Production
    d. Mineral Recycling Processes Development
  2. Soil Management
    a. Planting
    b. Cultivating
    c. Harvesting
    d. Soil Nutrient and Water Conserving Practices
  3. Mineral Extraction
    a. Exploration
    b. Excavation
    c. Transportation
    d. Production
  4. Collection Data and Analysis and Processing
    a. Monitoring and Recording
    b. Sample Collection
    c. Water Analysis

5. Utilization Control
    a. Pollution Regulation Enforcement
    b. Mine and Dump Restoration Regulation Control
    c. Monitoring and Enforcement of Mineral Production Quotas

C. Space and Atmospheric Monitoring and Control
  1. Research and Experimentation
    a. Instrumental Sampling, Analysis and Monitoring
    b. Effects of Outer-Atmospheric Pollution
    c. Reduction of Internal Combustion Engine Pollution
    d. Effects of Sunlight on Air Pollution
  2. Air Pollution Abatement and Control
    a. Chemical Analysis and Monitoring
    b. Engine Emission Inspection and Monitoring
    c. Industrial Pollution Identification and Control
    d. Anti-Pollution Education
  3. Meteorological Processes
    a. Chemical and Particulate Pollution Effects on Weather
    b. Smog Condition Prediction
    c. Analysis of Weather Factors Related to Urban or Industrial Planning
  4. Utilization Control
    a. Anti-Air Pollution Law Enforcement
    b. Long-Range Planning for Reduction of Pollution from Transportation Systems

D. Environmental Health Services
  1. Assessment
    a. Survey of Environmental Conditions
    b. Monitoring Potential Hazards
    c. Recording and Reporting
  2. Maintenance
    a. Food Services and Handling
    b. Waste Disposal
    c. Pest and Varmint Control
    d. Water Sanitation
  3. Services
    a. Regulation Enforcement
    b. Education
    c. Mass Health Services
  4. Administration
    a. Governmental Regulating
    b. Community Services
    c. Institutional Operations
    d. Home Implementation
    e. Industrial Safety Engineering

E. Development and Control of Physical Man-Made Environment
  1. Urban Planning
    a. Inter-area (County) Planning for Urban Development
    b. Demographic and Population Trend Survey
    c. Financial Resources Analysis
    d. Transportation Systems Planning
    e. Utility Services Planning
  2. Urban Development and Renewal
    a. Design and Construction (Reconstruction) of Public Facilities
    b. Architectural and Building Codes Enactment and Enforcement
    c. Population Growth Trend Monitering
  3. Rural Development
    a. Long-Range Land Water Resource Planning
    b. Rural Services Planning and Development
    c. Rural Facilities Design and Construction
    d. Rural Utilities Planning and Development
  4. Ornamental Horticulture
    a. Design and Culture of Land Covers and Stabilizers
    b. Design and Culture for Beautification
    c. Design and Culture for Behavioral.
    d. Design to Maintain Open Space

F. Development and Control of Physical Man-Made Environment
  1. Civil Technology Brocesses
    a. Design and Construction of Streets, Highways, Bridges, Roadways and Airfields
    b. Design and Construction of Waterways, Dams, Reservoirs and Hydro-electric Plants
    c. Design and Construction of Sanitation Systems
    d. Design and Construction of Towers, Buildings and Framework
  2. Noise Abatement and Control
    a. Noise Level Monitoring
    b. Noise Level Ordinance Enforcement
    c. Acoustical Design and Construction
  3. Solid Waste Pollution Abatement and Control
    a. Development and Enforcement of Solid Waste Disposal
    b. Recycle Solid Waste Materials
    c. Development and Implementation of Systems for Garbage Disposal

G. Forest, Range, Shore, and Wildlife Conservation and Control
  1. Research and Experimentation
    a. Development of Species Resistant to Disease
    b. Parasite Control Methods Development
    c. Shoreline Stabilization and Restoration
    d. Chemical Effects on Species and Ecological Systems
  2. Resource Survey and Monitoring
    a. Geographical Species Survey and Description
    b. Monitoring of Ecological Balance of Species
    c. Ecological Imbalance Detection
    d. Species Harvesting Data Collection and Reporting
  3. Resource Development
    a. Tourist Service Industries Development
    b. Reforesting and Replanting
    c. Fish and Game Repopulation
    d. Sport and Recreational Facilities Development
  4. Resource Protection
    a. Public Lands Creation, Protection and Management
    b. Forest and Range Disease and Parasite Control
    c. Conservation and Culturing of Species for Maintenance of Ecological Balance
  5. Utilization Control
    a. Sanitation
    b. Education
    c. Utilization and Harvest Regulation Enforcement

H. Water Resource Development Conservation and Control
  1. Research and Experimentation
    a. Instrumental Meteorological Data Collection
    b. Meterorological and Watershed Survey and Monitoring
    c. Water Table - Land Cover Relationships Survey and Analysis
    d. Water Disalinization
  2. Water Pollution Abatement and Control
    a. Treatment Plant Construction and Operation
    b. Chemical Analysis and Monitoring
    c. Bacteriological Analysis and Monitoring
    d. Anti-Pollution Education
  3. Civil Technology Processes
    a. Distribution and Collection Systems Development
    b. Water and Wastewater Treatment Systems Development
    c. Drainage Systems and Development
    d. Irrigation, Reservoir, Canals, and Waterways Development

4. Recreation Development, Conservation and Control
    a. Game and Fish Propagation, Harvesting and Control
    b. Camps, Parks, and Docking Facility Development
    c. Marine Management and Regulation
    d. Park Operation and Management
5. Utilization Control
    a. Water (Riparian) Rights Laws
    b. Regional Watershed Agreements
    c. Pollution Control Regulations and Enforcement
        Legislative Prohibition of Use of Non-Biodegradable Chemicals

XIII. FINE ARTS AND HUMANITIES

A. Operations
  1. Management
    a. Planning and Policy Administration
    b. Data Interpretation
    c. Personnel and Labor Relations
    d. Communications
  2. Mid-management
    a. Operations Techniques
    b. Data Handling
    c. Task Analysis
    d. Communication Skills
  3. Supervision
    a. Processing Techniques
    b. Personnel Relations
    c. Communication Skills
  4. Personnel
    a. Personnel Practices
    b. Communication Skills
    c. Skill Development
    d. Career Orientation

B. Fine Arts
  1. Creating
    a. Painting
    b. Printing
    c. Sculpture
    d. Musical Composition
  2. Performing
    a. Dance
    b. Dramatic Arts
    c. Music
    d. Film-Radio-Television
  3. Performing Arts Design
    a. Stage Set Design
    b. Stage Lighting Design
    c. Costume Design
  4. Performing Arts Production
    a. Stage Set Construction
    b. Stage Lighting
    c. Costume Production
    d. Stage Management

5. Artist Management
    a. Human Relations-Performing and Non-performing
    b. Public Relations
6. Visual and Graphic Design
    a. Illustration
    b. Industrial Design
    c. Fashion Design
    d. Environmental Design
7. Media
    a. Film and Tape Editing
    b. Film Processing
    c. Camera and Recording Operation

C. Humanities
1. Creative Writing
    a. Novel
    b. Poetry
    c. Essay
    d. Drama
    e. Short Story
2. Languages
    a. Foreign Languages - Classical and Modern
    b. Linquistics
    c. English Language
3. History
    a. Cultures

XIV. HEALTH OCCUPATIONS

- A. Operations
  - 1. Management
    - a. Planning and Policy Administration
    - b. Data Interpretation
    - c. Personnel and Labor Relations
    - d. Communications
  - 2. Mid-management
    - a. Operations Techniques
    - b. Data Handling
    - c. Task Analysis
    - d. Communications Skills
  - 3. Supervision
    - a. Operational Procedures
    - b. Processing Techniques
    - c. Personnel Relations
    - d. Communication Skills
  - 4. Personnel
    - a. Personnel Practices
    - b. Communication Skills
    - c. Skill Development
    - d. Career Orientation

- B. Health Information Systems
  - 1. Medical Records
    - a. Maintaining Patient Records
    - b. Microfilming, Storing and Retrieving
    - c. Transcribing
    - d. Coding and Indexing
    - e. Report Preparation and Transmission
  - 2. Medical Library Science
    - a. Storing and Retrieving Publications
    - b. Deleting and Dispensing
    - c. Report Preparation
    - d. Research
  - 3. Medical Illustration and Photography
    - a. Bio Medical Photographing
    - b. Film Preparation and Projection
    - c. Programming Audio-Visual Presentation
    - d. Graphic Arts

4. Vital Statistics
   a. Official Recording of Births, Deaths, Marriages, Divorces, and other Information as Required
   b. Retrieving and Dispensing Information
   c. Preparing Reports and Statistical Data
   d. Providing Copies of Official Records

C. Health Services Delivery
   1. Health Maintenance
      a. Immunizing
      b. General Screening
      c. Communicable Disease Control
      d. Health Education
   2. Community Health Services
      a. Mental Health Clinic Service
      b. Visiting Nurse Service
      c. Home Health Service
      d. Water, Food, and Waste Control
      e. Case Finding
   3. Hospital and Long Term Care Services
      a. Patient Care
      b. Diagnostic Processes
      c. Therapeutic Processes
      d. Administrative Support Services
      e. Restorative Processes
   4. Pediatric Care and Services
      a. Newborn Clinic Service
      b. Health Screening for Pre-School and School Children
      c. Medical Office Care
      d. Institutional Care
      e. Home Care
   5. Geriatric Care and Services
      a. Home Care
      b. Institutional Care
      c. Health Clinic Services
      d. Medical Office Care

D. Mental Health, Mental Illness and Retardation
   1. Care of Mentally Retarded
      a. Institutional Care and Services
      b. Social Services
      c. Training the Mentally Retarded
      d. Home and Community Services

- 2. Mental Health Maintenance
    - a. Clinic Services
    - b. Diagnostic Processes and Referral
    - c. Home and Community Services
    - d. Social Services
- 3. Psychiatric Services
    - a. Institutional Care and Services
    - b. Home and Community Services
    - c. Diagnosis
    - d. Therapy
    - e. Social Services

E. Accidents, Injuries, and Emergency Services

- 1. First Aid and Rescue Services
    - a. Ministering
    - b. Reporting
- 2. Medical Emergency Services
    - a. Transporting
    - b. Disaster Team Services
    - c. Institutional Emergency Service
- 3. Accidents and Poisoning, Control and Prevention
    - a. Information Preparation and Dissemination
    - b. Poison Control
    - c. Safety Education and Engineering
    - d. Records and Reporting

F. Dental Science and Services

- 1. Dental Health Maintenance
    - a. Examination and Assessment
    - b. Dental Prophlaxis
    - c. Preparing and Maintaining Records
- 2. Dental Care
    - a. Diagnostic Procedures
    - b. Treatment and Corrective Measures
    - c. Maintaining Patient Records
- 3. Dental Restoration
    - a. Making Impressions
    - b. Preparing and Maintaining Prosthodontic Devices

G. Pharmaceutical Science and Services

- 1. Regulation and Control of Pharmaceuticals
    - a. Storage and Accounting
    - b. Distribution Procedures
    - c. Records on Reportable Items
    - d. Information Dissemination

  2. Production of Drugs, Biologicals, and Chemicals
      a. Manufacturing
      b. Packaging and Distribution
      c. Research
  3. Retailing and Distribution
      a. Prescription Services
      b. Dispensing
      c. Delivering
      d. Records and Reporting

H. Medical Science and Services
  1. Sciences Basic to Medical Services
      a. Bacteriology
      b. Cytology
      c. Biology
      d. Physics
      e. Chemistry
      f. Mathematics
      g. Anatomy and Physiology
      h. Psychology
      i. Sociology
  2. Surgical Care and Services
      a. Surgical Procedures
      b. Surgical Patient Care
      c. Patient Rehabilitation
      d. Records and Reporting
  3. Medical Care and Services
      a. Medical Diagnostic Procedures
      b. Medical Patient Care
      c. Patient Rehabilitation
      d. Records and Reporting

I. Health Services Administration
  1. Public Health Administration
      a. Enforcing Health Regulations
      b. Public Health Education
      c. Health Related Information
      d. Research
  2. Institutional Administration
      a. Health-Testing and Referral
      b. Health-Care
      c. Sick-Care
      d. Preventive-Maintenance

3. Private Health Services
    a. Developing and Maintaining Facilities
    b. Medical and Health-Related Services
4. Health Maintenance Systems
    a. Health Insurance
    b. Cooperative Health and Medical Services
    c. Data Collection and Dissemination

XV. RECREATION AND HOSPITALITY

- A. Health Care
  - 1. Preventive Health
    - a. Recreation Sanitation
    - b. Recreation Safety
    - c. Leisure Consumerism
    - d. Leisure Product Testing/Controls
    - e. Physical Fitness Programs
  - 2. Counseling
    - a. Cut-rate Recreation Programs
    - b. Avocational Counseling
  - 3. Therapy
    - a. Therapeutic Recreation
    - b. Correctional Recreation
    - c. Drug Therapy

ROLES OF SCHOOL PERSONNEL
AS THEY RELATE TO THE CAREER EDUCATION PROGRAM

The implementation of the Career Education Program will depend upon the full cooperation of all members of the school, area, and district staff. Therefore, each member of the school team has definite functions and responsibilities.

1. ROLE OF THE MIDDLE SCHOOL TEACHER

a. Although career development begins in the elementary school years and continues throughout life, it intensifies particularly when the student reaches the middle school age. For this reason all teachers of the middle school play an important role in assisting students to make wise career choices. Suggested methods of implementation are included in the specific disciplines.

2. ROLE OF THE AREA AND DISTRICT CAREER EDUCATION COORDINATOR

GENERAL DUTIES AND RESPONSIBILITIES

Plan and develop the Career Education Program in the area and distrfct.

SPECIFIC DUTIES AND RESPONSIBILITIES

a. Provide advisory and consultant assistance to school personnel in achieving Career Education objectives at at the middle school level.

b. Coordinate the writing and publication of the Career Education behavioral objectives as they relate to all the subject areas of the middle school curriculum.

c. Formulate methods of implementation and coordination of Career Education Programs with all discipline areas.

d. Establish long-range goals, objectives and proposed plans for the district.

e. Coordinate the general use of career interest tests and inventories at the middle school level with Pupil Personnel Services.

f. Assist in the development of lists of organizations and businesses that will accomodate field trips where students can learn first hand about various career opportunities.

g. Assist in the development of a list of available resource persons from the community who will come to the classroom to talk to students about their careers.

h. Provide school personnel and students with the latest information regarding national manpower needs and employment trends.

i. Provide middle school teachers with occupation tables showing careers related to their subject.

j. Assist in the development of lists of the following informational materials which are relevant and useful in the implementation of a Career Education Program:

   1) Books on careers
   2) Films, filmstrips, recordings
   3) Periodicals
   4) Indexes and directories
   5) Catalogues for materials
   6) Federal training programs
   7) Professional publications and materials

k. Review materials and assist in the selection of materials for the various courses comprising these programs.

3. ROLE OF THE PRINCIPAL

The principal is responsible for:

a. The implementation of the Career Education Program within the school.

b. Providing positive leadership in developing the Career Education Program.

c. Requisitioning supplies, textbooks and equipment needed to implement the Career Education Program.

4. ROLE OF THE MIDDLE SCHOOL COUNSELOR

a. Helps students realize the importance of curriculum choices and suggest school subjects which offer the best opportunity to explore and/or prepare for careers.

b. Provides information through guidance activities about career opportunities.

c. Provides an opportunity for students to take interest and aptitude tests, and interprets the results.

d. Works closely with the Educational Media Staff in the selection of Career Education materials.

5. ROLE OF THE EDUCATIONAL MEDIA CENTER STAFF

The Educational Media Center plays a strategic role in career development.

The Educational Media Staff will:

a. Act as a resource to teachers in order to inform students about processes, opportunities, and technology related to communications media.

b. Provide expanded Career Education materials for all **middle** school students and teachers.

c. Suggest media to groups or individuals that provide knowledge and insight related to careers.

d. Maintains the special collections or displays that inform learners of media on careers and of the services provided by industrial, civic, and community institutions in occupational planning.

DEFINITION OF TERMS

CAREER - is the course of an individual as he progresses through life. It refers to the progress of the individual in relation to his work and may include a variety of jobs and a number of different occupations.

CAREER COUNSELING - a counseling process in which the student is assisted in identifying and utilizing his aptitudes, interests and abilities to develop realistic career goal.

CAREER EDUCATION - an experiential continuum which allows the student the opportunity to progress through the developmental stages in a well organized, self-paced, articulated process.

EMPLOYMENT - is any work for pay or profit.

JOB - is one of a group of similar positions in a single plant, business establishment, education institution, or other organization.

OCCUPATION - is a group of similar jobs. Secondary school teaching is an example of an occupation.

OCCUPATIONAL INFORMATION - consists of valid and usable data about positions, jobs, occupations, employment and career education. These include information about duties, requirements for entrance, conditions or work, and rewards.

VOCATIONAL EDUCATION - is practical training provided by the means of classes and laboratory work experience designed to develop knowledge, skills, abilities, attitudes and work habits which will enable the student to enter into gainful employment or post secondary educational experiences.

WORK - describes any kind of planned and responsible activity in which an individual engages with an expectation of getting a gainful return for his efforts.

WORK STUDY - (sometimes called Cooperative Education or Practical Vocational Training) a combination of study and practice conducted in an alternating schedule of half days, weeks, or other periods of time - providing employment for pupils with organized on-the-job training and correlated school instruction.

WORLD OF WORK - describes the sum total of all the kinds of work, from the very simple to the highly complex, in which men and women of today engage in order to earn a living.

GUIDELINES FOR FIELD TRIP

1. Making Your Journey Meaningful

    A. Enlist your principal's aid.
        1. Principals are invaluable while planning.
        2. Principals will assist you in arranging transportation.

    B. Enlist pupils' aid.
        1. Have them form a plan for recording information to be gathered and learned.
            a. Help them establish what questions they would like answered during the trip.
            b. Divide them into groups of approximately five according to information to be gained.
            c. Discuss acceptable field trip behavior.
            d. Follow-up activities, thank you notes, bulletin boards, art projects, etc.

    C. Enlist aid of hosts.
        1. Make prior arrangements at their convenience.
        2. Give hosts a list of things you would like pupils to experience.

    D. Enlist parents' aid.
        1. Have parental releases signed.
        2. Ask for volunteers to assist you during the field trips when needed.
            a. Assign an appropriate number of students to each parent. Have them assist in learning information and keeping tabs on "kids".
            b. Brief your parents on their role as your assistant.

    E. Enlist aid of Host Nation Personnel.
        1. Host Nation personnel will assist you in making contacts and arrangement for field trips off base.

GUIDELINES FOR GUEST SPEAKER

Obtain Principal Approval
Make Initial Contact with Guest

a. Review purpose of visitation.
b. Explain what you expect your students to gain from the presentation.
c. Provide guest with a list of desirable topics to be covered.

Student Preparation

a. Review background of guest.
b. Provide overview of topic.
c. Have student prepare questions they may ask speaker.

Follow-up Activity

a. Thank You Letter to Guest
b. Evaluation of Activity
c. Choose projects which will integrate the activity and support classroom instruction.

SUGGESTED RESOURCES OR RESOURCE PERSONS

1. Aerospace Medicine
2. Architect
3. Aircraft Mechanic
4. Bookkeeper/Computer Operator
5. Beautician
6. Bakery
7. Computer Operator
8. Code Expert
9. Choir Director
10. Chaplain
11. Draftsman
12. Doctor
13. Dairy - Management Personnel
14. EOD - Explosive Ordinance Disposal
15. Electrician
16. First Aid
17. Foreign Services
18. Far East Affairs-State Department
19. Jungle Survival School
20. Locksmith
21. Librarian
22. Lawyer
23. Language Expert
24. Meterorologist
25. Microbiologist-Base Hospital
26. Mortician
27. Mess Facilities
28. Nurse
29. Pilot
30. Plumber-Civil Engineers
31. Public Health
32. Research Psychologist
33. Radio Operator
34. Radio Announcer
35. Scuba Diver
36. Stewardess
37. Secretary
38. Sentry Dogs and Trainers
39. Sugar Refinery
40. Technical Representative
41. Television Station
42. Post Office
43. Veterinarian
44. Water Plant Personnel

MEDIA

Each school's Educational Media Center plays a vital role in the Career Education Program. This center is the key resource for acquiring necessary materials. Efficient scheduling of materials for use in the classrooms is important.

The media specialist and/or the career education coordinator gathers materials, advises teachers on effective utilization, keeps the school's file of speakers, includes a career education section in the vertical file, and sets up a career corner.

In the Educational Media Center, children can gain valuable work experience: checking materials in or out, shelving, updating files, operating audio-visual machinery, and picking up or delivering materials.

A list of appropriate films which support the middle school's Career Education Program, will be made available as an appendix to this handbook.

Teachers should seek the assistance of the educational media specialist in your school to ascertain which materials are available.

RELATING SCHOOL SUBJECTS TO CAREERS

"No teacher can truly promote the cause of education unless he knows the mode of living for which that education is to prepare his pupil." *

The methods by which career information can be introduced in the classroom are limited only by the ingenuity of the teacher. Opportunities exist in all school subjects for correlating the s students developing skills and understandings with the work world. A consideration of these relationships by school teachers helps to broaden students' appreciation of their abilities for different occupations and lays the foundation for realistic planning later. Teachers will find that the use of occupational information in the classroom will motivate interest in the subject and will enliven the course of study by making it current and meaningful to the pupils. It should be the goal of all teachers to integrate career information into all subjects. At the middle school level, concerted effort should be made to broaden the student's familiarity with many occupations, rather than stressing detailed study of only a few occupations. Although a student may already have made his choice of life work, he will still profit from an exploration of other related careers which may be appropriate alternatives for his consideration. In addition to arousing interest and providing information about a variety of occupations, the teacher should aim to develop wholesome and constructive attitudes toward work. A designed outcome should be to provide the student with the ability for self-direction, so that each student learns how to make satisfying educational and vocational plans.

CAREER EDUCATION CONCEPTS

If teachers have provided an adequate career education program, most students will have a good understanding of the following concepts by the completion of the eighth grade.

1. People have many kinds of careers.
2. Every occupation contributes to society.
3. Every individual can have a meaningful, rewarding career.

*Source Unknown

4. Careers require different knowledge, abilities, and attitudes.
5. Every person is an individual with different abilities, interests, and needs.
6. A person's best career direction develops over a long period of time.
7. Every individual develops a personal "style" which he can fulfill in a career with a similar "style".
8. People pursue careers for many reasons.
9. A person may be suited for several different careers.
10. Careers can be grouped in various ways into "families" requiring similar abilities and providing similar rewards.
11. Every career requires some special preparation.
12. Career preparation must follow a plan.
13. The choice of a career usually involves a compromise between greater and lesser needs.
14. Work experience facilitates career decision-making.
15. People change, and sometimes change careers, as they go through life.
16. Changes and conditions in the world affect careers.
17. People must adapt as the world changes.
18. Different occupations are interrelated in many ways.
19. Any career area has different levels of responsibility.
20. A person's relationships with other people, with his employer, and with society affect his own career as well as the careers of others.
21. A worker must understand, not only his job, but also his employer's rules, regulations, policies, and procedures.

INTEGRATING SUBJECT MATTER

There is a need for every teacher in every course to emphasize the contribution that the subject matter can make to a successful career. In planning classroom activities, teachers should keep in mind that learning should not be reserved to the classroom, but that learning environments will also be identified in the home, the community and military facilities.

Students should be exposed to concepts of technology and a variety of experiences should be provided to help them become more aware of vocational alternatives and career requirements.

Occupational information, effectively used, is much more than just a group of pamphlets in the library or the counselor's office. It is the integration of all available appropriate materials into every part of the curriculum and total program of the school. Experience has shown that most subjects can offer exposures to the world of work. The challenge to the classroom teacher is to assist in the development of a broader, more realistic perspective for the future on the part of all youth.

Specific Discipline Activities

ART

Those students who possess talent and interest in art will want to investigate the vocational opportunities growing out of this subject. They will discover, with the teacher's help, that vocations in this field are not limited to teacher, sculptor, and other self-employed artisans, but that art abilities are needed in advertising, printing, and publishing illustration for magazines and books (including medical and technical publications), photography, fashion and textile design, stage design, interior decoration, and architectural and industrial design.

A teacher of an advanced art class encouraged her students to study art vocations by asking them to prepare research papers on occupations of their choice. As a result of this assignment, one girl read about the use of the air brush to apply shade and color to drawings and photographs. She then employed this process successfully in the making of a poster, thereby obtaining a tryout for a possible vocation and finding encouragement for further exploration of training and placement opportunities in this field.

Another teacher regularly plans field trips for her classes to museums, art schools, and firms employing artists, such as commercial printers, department stores, and advertising agencies. Her students learn through these visits that employment in the commercial art field exists largely in urban marketing and printing centers. They also find that it is important to investigate specialized art schools thoroughly to determine the adequacy of the training offered by these schools.

All teachers can use occupational posters to stimulate students to examine various art careers.

CAREERS RELATED TO ART

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
I B. A. or above	Histological Illustrator	Advertising Manager	Archaeologist Architect Auto Designer Aeronautical Engineer Industrial Designer	Landscape Architect	Curator Art Editor Art Teacher	Creative Artist Painters Sculptors Designers Stage Designers Jewelry Ceramic Designer
II High School Plus Technical		Art Appraiser Commercial Artist Floral Designer Jewelry Store Manager Art Dealer	Draftsman Die Designer Etcher, Hand Photo-engraver Architectural Modeler Delineator		Art Librarian	Advertising Lay-Out Designers Clothing Millinery Textile Interior Decorator Greeting Card Illustrator
III High School Graduate	Caterer Cake Decorator	Art Auctioneer Buyer of Art Goods Display Man	Bookbinder			Drapers Illustrators Photographer Cartoonist Mannequin Colorer Hand Grainer
IV Less Than High School Graduate	Wardrobe Mistress Art Gallery Guard	Stone Carver Gift Wrapper		Landscape Gardener		Anumator Artist Show Card Writer Plaque Maker Craft Worker

ACTIVITY: PACKAGING PROJECT

AIM: This activity helps the student to become more aware of the importance of packaging for product purchasing.

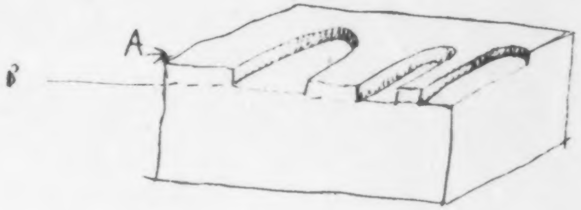
Description: Have students set up a display of commonly purchased products. A discussion of color, design, package shape might help the student to understand why he purchases a certain product. Using a plain paper cup or plate, design an all over eye catching design. Combine repeat patterns, abstract design and letters for an interesting design.

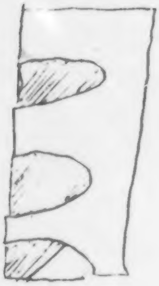
Materials: Plain paper cups, red paper plates, magic markers.

ACTIVITY: RUBBER STAMP DESIGN

AIM: Through their project students will understand the purpose of a company emblem

Description: The idea behind this project is to make a symbol for each student. Once the project is finished the rubber eraser stamp is a memory of the world of work. Each student can select one, two, or three of his initials. Combine them in different ways so as to make an interesting form within the eraser size. Make certain the lettering is wide. Like Linotype the letters must transfer onto the eraser in the reverse. To easily reverse this design hold the design up to light and trace on the back side. To transfer the pattern onto the eraser line-up the reversed design with the edges of the eraser. Trace over all the lines with a pencil. If the design is not in reverse, rub it off and start again. With an X-acto knife or pocket knife cut around the edge of the areas to be removed - next use the knife in a horizontal cutting manner. When lifting the void areas be careful that the cuts are clean. These erasers rip very easily. This space will create open areas around the initial form. When the design is finished, stamp on an ink pad and then on paper! Try other sides of the eraser.





Note: This can also be used to make alphabets for quick sign making. Play stamp sets can be purchased in the toy section of stores.

Material: Tracing paper, pencil, Rub-kleen green erasers 6002 or 6004, X-acto knife or pocket knife.

Resource: Newspaper type setter

ACTIVITY: RECORD COVER DESIGN

AIM: To teach the scope of advertising

Description: Each child will select recording artist for his record cover. This may also be a made-up group. With professional covers as a model, students should discuss why such albums were purchased. Design, color, lettering and group's fame might be a reason for purchase. After each album cover is finished, display the new "cuts".

Note: A field trip to an advertising firm would be good. Also, a record company or disc jockey might be a good resource person.

Material: 12 x 12 paper, crayons, magic markers

ACTIVITY: NEWSPAPER LAYOUTS

AIM: Help the student to understand simple layout procedures

Description: With two photos and two columns of print from a newspaper, have students arrange this on a sheet of notebook paper. Size of type, length of type and shape of the photographer will be items to consider. Also, hand lettering can be used to inhance the layout of the page. When choosing a photograph consider whether the photograph is appropriate for the all-over design. Also notice the direction of the objects in the photograph. This cue may help in the general layout. When the arrangement is pleasing to the eye, the student can glue all pieces to the notebook paper.

Material: Old newspaper, paste, and scissors.

ACTIVITY: WRAPPING PAPER

AIM: To make students aware of a basic form of printing

Description: Have students collect a variety of objects which might print interesting patterns or textures. Examples of this are potato masher, styrofoam packaging, sponges, hair rollers, and sandpaper. Through examples of clothing, students can talk about what is a repeat pattern. On a large sheet of craft paper, have students experiment with the printing devices. The amount of paint and the color choice will affect the general appearance of the design. Try different spacing and color affects. Also, several different color combinations may prove to be rather interesting.

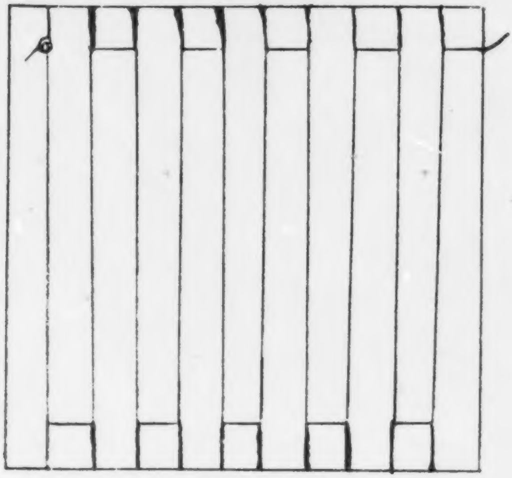
Note: This project can also be used to make wall hangings, book covers or window shades. Be sure to have enough space to allow these sheets to dry.

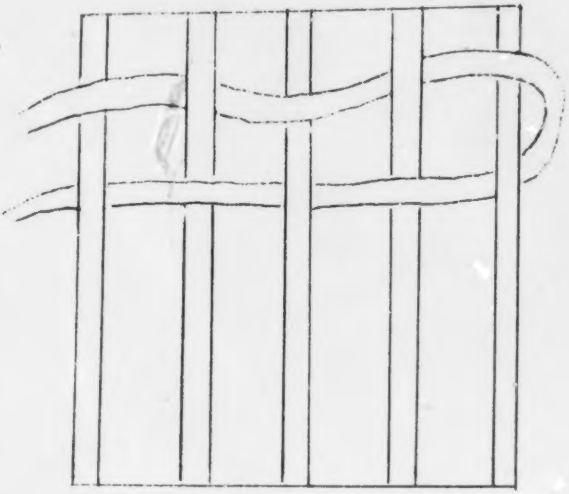
Materials: A temporary clothes line might be used to dry the sheets. Tempera paint, craft paper 36" x 36" and newspaper.

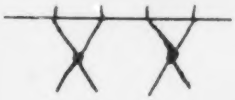
ACTIVITY: PILLOW, PURSE OR PLACEMAT

AIM: To help the student understand the process of weaving

Description: Size of this weaving depends upon the length and width of the shirt. With a ruler measure off half inch marks across the top and the bottom of the cardboard. With a pair of scissors cut from the edge into the marks about 1/2 inch. This will act as slots to hold the warp string. Knotting the yarn, start on the upper left hand corner going to the lower left hand corner. Then proceed to the next seat on the top. Continue until the whole warp is threaded.





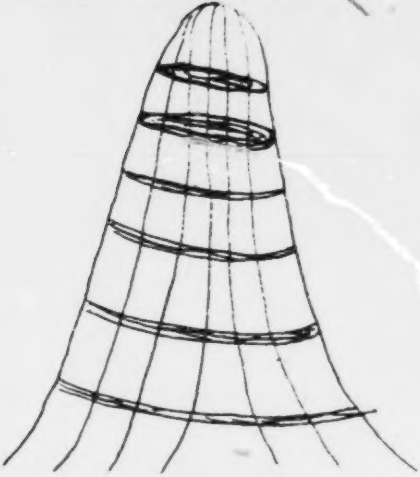


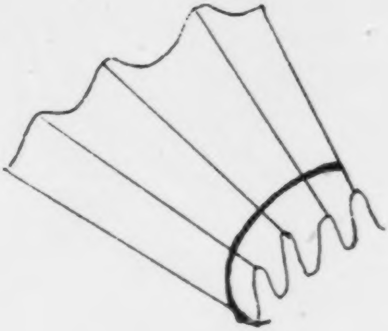
Make certain the warp has an even tension. Now comes the fun! With another roll of yarn, pull the weft through alternative strings. Use a ruler to help push the yarn to the top. In returning to the other side use the opposite set of warp strings. Variation on this method will result in different patterns. When finished, knot the warp strings together in sets of two. If this is to be a purse or pillow, fold in half and sew the sides together.

ACTIVITY: TIE-DYING SHIRTS, PILLOW CASES, BED SHEETS

AIM: To help the student to understand the mixture of colors which affects our daily life

Description: This groovy project will not only teach mixture of color but also result in a finished project. Students can assist in this project by volunteering rubber bands, plastic wash basins, and dye. A preliminary review of color mixing will assist the student in his dying. The two basic knots are shown below. To make a circle design pull the material away from the table.





Tie rubber bands around the circumference of the knot. To make a line knot at the sleeves of the material, tie a knot around the two ends as illustrated above. Once the dye is mixed, place the dyes in some type of order (yllow, orange, pink, red, light blue, dark blue, purple, green, brown and black). Have students start with the yellow. Everything that is to be dyed yellow should be done at this time. Moving gradually forward dye to the darker colors. Going backwards on dying risks contamination of the dye. After finishing with the dying, remove the rubber bands.

Materials: Dye, basins, and rubber bands. Interior design and painting companies might be good resource people.

CLASS	FAMOUS PEOPLE	TOOLS USED	CAREERS AVAILABLE IN	CAREERS IN	SUBJECT IN SCHOOL THAT
CATEGORY	ART	JEWELRY DESIGN	ART	PAINTING	PREPARES YOU IN DESIGNING ILLUSTRATION
P					
C					
S					
A					
F					

FACTS IN FIVE PLAYCARD

PLAYER/TEAM	

SCORING TABLE

BUSINESS EDUCATION

One of the principal goals of business education courses is to prepare young people for a career or office occupation. In the middle school some emphasis is placed on "hands on" experiences, generally thru the introduction of the student to typing. However, introductions to copying processes, duplicators, calculators, computers, and even basic filing systems could be introduced thru field trips and resource personnel.

CAREERS RELATED TO BUSINESS EDUCATION

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ART & ENTERTAINMENT
I B. A. or above	Employment Manager Personnel Manager	C. P. A. Broker Auditor Controller Credit Manager Officer Manager Sales Manager Market Specialist Accountant Banker	Telephone Engineer Data Processing Systems Analyst Systems Engineer		College Teacher Commercial High School Teacher Journalist	
II High School Plus Technical		Purchasing Agent Secretary Paymaster Bank Teller Salesman Department Store Buyer	Contractor General Medical Records Librarian		Law Clerk	

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ART & ENTERTAINMENT
III High School Graduate	Telegrapher Telegraph Ageht Railroad Conductor Postal Worker Telephone Operator	Bookkeeper Cashier Stenographer Credit Clerk Office Worker Sales Clerk Station Agent Dispatcher Typist Billing Machine Operator Receptionist File Clerk	Tabulating Machine Operator Programmer			
IV Less Than High School Graduate	Census Taker Rural Mail Carrier Elevator Operator	Stock Clerk Multigraph Operator Messenger Boy Collector Office Boy		House to House Salesman		

ACTIVITY: TYPING

AIMS: The student will correspond with a business and analyze and evaluate the results of their letters.

The students will gain a comprehension of the impact and importance of the typewriter in contemporary occupations.

Description: After the student has learned the functions, the keyboard, and has acquired some skill with the typewriter the following activity could be introduced:

1. Let the class select, from several choices, a company or companies, to which a business letter will be sent asking for information about the company's product or service. Some companies offer free samples that could also lead into a discussion of advertising techniques, ethical practices, and a study of how the companies reacted to the student's letter. The following questions could be answered after answers have been received:

    a. Did the company answer the letter immediately?
    b. Was the answer formal, informal, warm, tense, lengthy?
    c. Was a form letter used as an answer or was a personalized letter used?
    d. Did the company send what you asked for?
    e. Would you like to work for a company like the one you received a letter from? Why?

2. Have the class make a list of occupations where a typewriter could not be used.

ACTIVITY: DUPLICATING MACHINES

AIM: To acquaint the student with a knowledge of the duplicating machines so that he may analyze this machine's value to office occupations.

Description: Very few schools have duplicating machines (xerox, ditto, or mimeograph) for class use. However, most school offices have at least one of these machines and it should be made available for a demonstration. Preferably, the demonstration should be given when the school office has materials to be duplicated for student use. Class discussion of the project could center around the following:

1. How many occupations could be named that are associated with the process the students watched? (Photoprocess, inks, paper, metals, operators, others)
2. When are the machines practical and when are they not practical?
3. Where it is possible, a field trip should be organized to an office or offices to observe several different kinds of duplicating machines. A comparative study can be made based upon the advantages and disadvantages that are apparent to the students.

ACTIVITY: CALCULATORS

AIM: To acquaint the student with a knowledge of as many calculators as possible and to evaluate their use in office occupations.

Description: There are a wide range of calculators available for students to observe. Very few middle schools will have calculators that are readily suitable for student use. However, there are many different kinds of calculators that are available; for instance, the cash register is a calculator, the abacus or soroban is a calculator, and so is the adding machine. A visit to observe a calculator should be preceeded by a discussion period involving the following:

1. How long do you think man has been using calculators?
2. Would it be practical for your family to own a calculator? Why or why not?
3. How many different occupations do you know that should employ calculators?

4. In how many of your school courses do you think you could use a calculator?
5. Give some reasons why you think use of the calculator, in some form, should increase or decrease over the next twenty years.

ACTIVITY: COMPUTERS

AIM: To familiarize the student with computers, their impact on the economy, and the many occupations related to the computer industry and the relationship of his school courses to the computer industry

Description: In the last three decades the economic growth has depended to a great degree upon the computer. Many jobs in industry have been created by the use of the computer and it is true that some jobs have become obsolete and eliminated because computers have replaced the person. However, computers have made an overall positive impact in our economy. To make students more knowledgeable about occupations that use computers and to enable students to have an appreciation for the computer's role in industry the following suggestions are offered:

1. Arrange for a field trip to observe a computer unit. (Note: Care should be taken to have discussion about what the students will be observing. What function is the computer performing for the unit personnel, finance, supply, etc.? How many persons would it take to do the same job in the same length of time?)
2. Have students list ten occupations of their own choosing. Recap the total class response and list the choices on the black board and number then 1 thru . . . Then let each student draw a number which represents an occupation listed on the black board. The student will be asked to identify how his number's occupation relates to the computer. (i.e., Number 5 - Policeman - Response: A computer could be used to quickly identify the license number of an automobile that has left the scene of an accident.)

3. There are many jobs related to the production, operation, sales, and maintenance of computers. The following diagram can be introduced to illustrate how school courses are related to computer occupations:

	PRODUCTION	OPERATION	SALES	MAINTENANCE
Language Arts				
Science				
Math				
Social Studies				
Phys. Ed.				
Business Ed.				
Art				
Foreign La.				
Home Economics				
Music				
Health				
Industrial Arts				

For example: Art could be useful in the production stage of computers in that design of the cabinet and appearance of the unit becomes an important sector in putting a competitive item on the market. In operation, art can be utilized in presenting to the operation the most pleasant surrounding which includes an understanding of color. In sales, art plays a major part in the advertising of the product and in maintenance color is used as a code for various parts and components.

ACTIVITY: FILING

AIM: To acquaint the student with various filing systems and to give him an appreciation of the place of good filing practices in office occupations

Description: Every office must keep records and these records should be filed in some order. Offices use different methods such as alphabetical, geographical, ascending or descending order, by product, by expenditure, and other methods devised by the nature or demands of the business. And files can be made up of cards, folders, letters, books, tapes, or films. To gain an appreciation of files the following activities could be introduced to the students:

1. Discuss how files are used in the school. (The library and school office are ideal exposure points.)
2. Utilize the field trip for a visit to the personnel, supply, or finance offices. Discuss before hand or have a resource person address the group on what they will see and how the files are important to the overall efficiency of the division (personnel, supply, finance).
3. A simple room project can be utilized to illustrate some problems on filing. Use 3x5 filing cards. Let students list all the objects in the room on the black board (wall, floor, lights, pencil sharpener, teacher's books, everything!) List all of the items on the 3x5 file cards. Then set up three different office files: one file for a breakfast and food company, another for a school equipment supply company, and a file for a company that makes baseball gloves. The challenge of this project is to illustrate the categories that offices must consider for their filing system. For instance, the breakfast food company would be interested in only the student names, the school equipment company would be interested in equipment and books, and the baseball glove company would want boy's names.

FOREIGN LANGUAGES

There are two discernible methods of implementing vocational information through the study of foreighn language. One method is to teach the culture of the people who use the language, focusing attention on their means of earning a livelihood. Some illustrations of this method for the study of Latin have been provided by Billings. First, in reading Cicero's orations in Latin, students soon learn that Cicero was a lawyer. This immediately raises the possibility of showing how our legal system is based upon Roman law. By tracing the derivations of such legal terms as "alibi" and "bona fide", the teacher may stimulate student interest in the career of law. Second, a translation of Roman Manilian law reveals the difficulties of that value of insurance, had it existed then. A discussion of the origin of insurance in eighteenth century England can lead to an analysis of the insurance business as it exists today and the kinds of jobs which have been created by this growing business. Third, a study of Roman culture offers the opportunity to compare barbering and hair dressing modes of that era with their modern counterparts. The vocational implications of this kind of comparison are readily apparent.

The other method of using foreign language study to help students learn more about vocations relates directly to the derivations of our English words. As an example from Billings, the Latin word for hand, manus, is easily connected to the words manufacture, manual, and manicure--all having vocational implications. Such words as librarian, libretto, volume, and voluminous, which are based upon the Latin words for book, liber, and roll, volumen, can be used by the teacher to show differences between ancient and modern writing and, further, to show how the printing and publishing industry has developed today. Finally, the derivation of "secretary" from secretus, meaning a keeper of secrets, suggests what is involved in the work of a modern business secretary.

In modern language classes, skillful teachers have devised many methods of relating vocational information to class activities. Special guidance relating to college foreign language requirements and the place of foreign languages in the working world often is given a place in the curriculum. Such sessions emphasize that foreign language skills are particularly important as a supplement to other professional skills. Some schools have developed guidance handouts indicating areas in which foreign language knowledge will be helpful.

Dialogues and skits make up a part of foreign language learning. These provide an opportunity for introduction of vocabulary pertaining to occupations and require some thought about what such occupations require of the worker.

For the teenager facing decisions about higher education and career, literature can have great value. The alert teacher can direct the pupil to books which contain problems similar to those the youngster is trying to solve. Fiction and biography in English or the foreign language can serve this purpose.

Pen pal exchanges with students in other countries, once begun, develop shortly into discussion of school studies, vocational interests and career opportunities. Many teachers see that such letters are shared with all the language students since they create such great interest and are of value to all. Certain class activities present an opportunity to try some of the more thrilling uses of foreign language. A mock United Nations meeting with simultaneous interpretation is one of these. Here pupils themselves play the roles of speaker, translator and listener at an international meeting. Another such activity is a mock radio program, perhaps even a "Voice of America" news broadcast or interview with a famous personality.

Some teachers have been very successful in using student leaders in class activities. Such leaders actually teach certain concepts or conduct drill exercises, thus experiencing first hand what teaching as a profession would be like.

Finally, in advanced courses, students practice translation of written texts and learn what would be expected of them as translators for a firm engaged in international trade.

The high school language course can provide a real service to the nation by opening new vocational horizons to the student. Here may be his thrilling contact with the world beyond his city or state. Here he can learn that he is not necessarily bound to his home town industries or the family plow.

Promising career opportunities are open to serious students of languages. The use of occupational posters will motivate young persons to seek further information about this field.

CAREERS RELATED TO FOREIGN LANGUAGES

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
I B. A. or above	Diplomat Curator Missionary	Tour Conductor Commercial Attache Branch Manager Airways Corps	Translator of Technical Writings Physician Nurse Engineer Geologist Archeologist Architect Pharmacist		College Language Teacher Writer Foreign Language Paper Foreign Correspondent High School Langauge Teacher	Opera Singer Critic Actor
II High School Technical	Language Librarian Steward or Stewardess Receptionist	Dealer Foreign Books Secretary Bilingual Travel Bureau Manager Foreign Service Worker Fashion Buyer	Wireless Operator Researcher		Broadcaster	Art Collector
III High School Graduate	Interpreter Translator Customs Inspector Immigration Inspector Traveling Companion	Foreign Clerk Foreign Collection Clerk Exporter Importer		Policeman		

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
IV Less Than High School Graduate	Hotel Worker	Hotel Clerk Armed Forces Merchant Marine Information Aide Courier		Taxi Driver		

ACTIVITY: "WHAT'S MY LINE"

AIM: Vocabulary Building and Speaking

Description: Every student looks up a profession of his choosing and prepares himself to answer questions concerning this job from a panel of four selected by the teacher.

Questions that may be asked:

1. Do you work in an office?
2. Do you work with words? Figures? Machines? What percent of the time?
3. Do you work with people?
4. Was special training necessary for this job?
5. Did you get your training in high school? Vocational school? College? On the job training?
6. Do you have special skills? Typewriting? Shorthand?
7. Do you have regular working hours?
8. Is a license necessary for the job?

The students who are questioned can only answer "yes" or "no", but the moderator (teacher) might have to intervene now and then to qualify our answer. Each panel member can ask one or two questions.

ACTIVITY: DEVELOPING A VOCATIONAL CORNER

AIM: All students will relate verbally or in writing, how foreign language courses are related to the work-a-day world and to name a career of their choice in which foreign language is used.

Description: Have students build a "Vocational Corner" consisting of materials on occupations and professions directly or indirectly utilizing knowledge of a foreign language.

Introduce students to the purpose of a vocational corner at the beginning of the school year.

Write letters to a company engaged in import-export business to find out job opportunities with that company. Other foreign related businesses can be used.

Materials: Dictionary of Occupational Titles and Occupational Outlook Handbook

ACTIVITY: SPORTS UNLIMITED - VOCABULARY BUILDING

AIM: The student will be able to list and characterize a wide range of careers related to athletics by building up his vocabulary in a foreign language.

Description: Each sport requires many different kinds of abilities, talents, and skills that are necessary to succeed. Make a listing of the various sports on the board and ask the students to describe the abilities, talents and skills that are necessary to succeed.

Make a listing of the various sports on the board, and ask the students to list, nouns, verbs and objectives describing the abilities, talents, and skills that are necessary for one to possess to participate satisfactorily. The student can list the words on paper utilizing the glossary at the end of the book and dictionary. This could be inclass or out of class activity.

ACTIVITY: METEROLOGY

AIM: Learning about weather can be an exciting way to expand your students vocabulary.

Description:

Place the following questions on the board or on a handout:

What are the different clouds?

CIRRUS
CIRROSTRUTUS
ALTOSTRUTUS
ALTOCUMULUS
CUMULONIMBUS
CUMULUS
STRUTOCUMULUS
STRUTUS
NIMBOSTRUTUS

What are the different kinds of wind?

CALM
LIGHT AIR
LIGHT BREEZE
GENTLE BREEZE
MODERATE BREEZE
FRESH BREEZE
STRONG BREEZE
MODERATE GALE
FRESH GALE
STORM AND HURRICANE

The above questions provide the teacher with an opportunity to enrich the student's vocabulary. This could be a one or two day lesson.

ACTIVITY: BULLETIN BOARD

AIM: Career Awareness

Description: Have the students fill in the rectangles with job areas or specific occupations (security, media, maintenance, clerical, interpreter) picture or newspaper clippings related to foreign language occupations as illustrated on the next page.

ACTIVITY: CAREERS

AIM: To familiarize students with career opportunities related to foreign languages

Description: Fill in the blanks with the corresponding letters. The letters are picked at random. The class and category are chosen by subject matter. The players have five minutes to complete as many blanks as possible for a square to be properly filled it would have a word which starts with the letter in the left hand column and must correspond with the category.

CLASS	FOREIGN FAMOUS PEOPLE	TOOLS USED	CAREERS AVAILABLE IN	CAREERS IN	SUBJECT IN SCHOOL THAT
CATEGORY	LITERATURE	in BUSINESS	FOREIGN LANGUAGES	ARTS & ENTERTAINMENT	PREPARE YOU FOR FOREIGN SERVICE
C					
G					
D					
B					
P					

HEALTH

1. "Brainstorming" with the aid of your students, make a list of all the health related jobs you can think of in ten (10) minutes.
2. Students will search the base phone directory or stateside newspaper (see I. M. C.) and make a list of health related jobs.
3. Students "pantomime" using different health occupations as subjects.
4. Have students make up want ads on a 3x5 card as if they were the employer and they were searching for someone to fill a vacancy.
5. Students will match specific jobs in the field of health with specific educational requirements.
6. After exploring health occupations the student will demonstrate how a job in the health area involves working with people, ideas, or things.
7. Write a letter applying for a job opening the newspaper. (See I. M. C. for stateside papers.)
8. Have the students write a mock newspaper article and assemble them into a health newspaper.
9. Before and after. Have students write a job description before doing research into a specific health occupation. Then let them do research and write another one one the same occupation.
10. Put a list of people famous in the health field and have students list their specific fields.
11. Make an illustrated notebook depicting health career choice and how a student's hobby might enhance his career.
12. The student will chart the basic education requirements for 5 fields of health (see counselor and I. M. C. if help is needed).
13. Students will form a committee to evaluate present school curriculum and suggest courses directed toward meeting the requirements of their particular vocational choices.
14. Students working in small groups will prepre a tape discussing a specific health vocation.
15. The student will discuss his explanation of a various health area in terms of a possible career choice.
16. As a class, attempt to staff a new hospital with the health personnel needed to make it function.

ACTIVITY: RANK 20 OCCUPATIONS

AIMS: To get an idea of student attitudes toward various occupations
To attempt to work toward the attitude that it is not the job but the person that makes the difference in success on the job
To stimulate discussion about job attitudes

Description: Hand out ditto sheets. Have students rank the occupations in the order that they feel they should be. There should be little discussion prior to the first ranking other than how to rank. Occupations that are not known may be described very briefly, e.g., "Medical Technician works in a lab,"or "Pharmacist works with medicines in a drugstore."

After the initial ranking discuss the jobs more fully. Use questions such as "What would happen if the maintainance inspector (etc.) did not do his work?" Discussion might go like this--"Trash and litter would build up in the street. Tires would be punctured causing people to be late or miss appointments. Children might be hurt in the litter. Wind might blow litter causing injury to pedestrians."

After the discussion have students fold the first ranking back out of sight and re-rank on the right hand column. Compare left and right hand columns and discuss any changes, especially--why.

Rank the following 20 occupations in their order of importance according to the way you feel about them.

1. Dietitian
2. Laundry Plant Manager
3. Doctor
4. Maintanance Inspector
5. Occupational Therapist
6. Pharmacist
7. Foundry Worker
8. Dental Assistant
9. Social Worker
10. Cosmetologist
11. Nurse
12. Personnel Officer
13. Refrigeration Mechanic
14. Electrician
15. Medical Technician
16. Clinical Psychologist
17. Cook
18. Telephone Operator
19. Grocery clerk
20. Medical Machine Operator

ACTIVITY: KINDS OF TOOLS AND MATERIALS

AIM: Stimulate discussion about career areas in which students may be interested

Description: Experience indicates that the teacher needs to read the names of occupations. Some students recognize the sounds but not the spelling. Have students work in small groups if they prefer. They are to name any tool or material used by the occupation. In the case of an area such as personnel manager the tools may be "his own abilities" and the materials will be "people". There are no specific right or wrong answers. It may be helpful to say that "tools" are what the person uses and "materials" are what the person uses them on. Thus a nurse would use a "Hypodermic" needle on a "patient or person".

WHAT KIND OF TOOLS AND MATERIALS DO THESE PEOPLE WORK WITH?

Professional, Technical, and Managerial Occupations

Tools Materials

1. Dietitian
2. Hospital Statistician
3. Psychologist
4. Dentist
5. Sanitation Engineer
6. Bacteriologist
7. Entomologist
8. Pharmacist
9. Veterinarian
10. Nurse
11. Industrial Hygienist
12. Nurse's Aide
13. Podiatrist
14. Toxicologist
15. Mortician
16. Pharmaceutical
17. Research Aide
18. Optometrist
19. Chiropractor
20. X-Ray Technician

ACTIVITY: SALARY, EDUCATION, FUTURE

AIM: To present information about occupations in a new way

Description: Hand out ditto sheets. Review names of occupations so students will be aware of the duties of each. Have students guess at the information required or at least fill in the ones they know. They may do better if they work in small groups. After about 15-20 minutes go over each occupation giving correct information. Let students call answers correct if they are reasonably close. Discuss especially the number of workers in terms of 1,000's, 10,000's, or 100,000's and future of occupations considering increasing populations and needs that population growth produces.

This unit may also be assigned as a project for students to research information for a present back to class.

OCCUPATION	SALARY	EDUCATION	NUMBER OF WORKERS	FUTURE OF OCCUPATIONS Good, So-So, Poor

HOME ECONOMICS

There is a wide range of occupations related to home economics, with variety in functions and in degree of skill and training required. Some occupations to which the study of home economics may lead are county home demonstration agent, beautician, dietitian, institution housekeeper, cook, food buyer, food checker, waitress, power machine operator, fashion and textile designer, test kitchen research worker, clothing salesperson, and clothing buyer.

Suggestions might include class visits to flour mills and other large food processing plants enabling students to see home economists in action. In rural areas the county home extension agent can be observed at work.

CAREERS RELATED TO HOME ECONOMICS

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
I B. A. or above	Homemaker	Home Demonstration Agent Journalism Institution Manager Test Kitchen Worker Extension Service Specialist	Dietician Food Chemist Research Worker Registered Nurse		Homemaker College Teacher Home Economics Teacher Occupational Therapist Youth Group Advisor Public Health	

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
II High School Plus Technical	Homemaker Air Stewardess Chef Practical Nurse	Food Salesman	Meat and Dairy Inspector		Homemaker	Fashion Designer Textile Designer Interior Decorator
III High School Graduate	Homemaker Barber Beautician Caterer Head Waiter Alteration Seamstress in Dept. Store		Dressmaker Tailor Upholsterer Candy Maker		Homemaker	Cake Decorator Bon Bon Maker
IV Less Than High School Graduate	Homemaker Butler Cooks Nurse Maid Bus Boy Chambermaid Wardrobe Mistress Waitress Nurses Aide	Comparison Shopper	Baker Butcher Dry Cleaner Hands Garment Inspector Garment Maker Factory		Homemaker	Head Embroiderer

ACTIVITY: CAREERS IN FIVE FOR HOME ECONOMICS

AIM: To familiarize students with career opportunities related to Home Economics

RULES: Fill in the blanks with the corresponding letters.
The letters are picked at random.
The class and category are chosen by subject matter.

The players have five minutes to complete as many blanks as possible. For a square to be properly filled, it should have a word which starts with the letter in the left hand column and must correspond with the category.

CLASS	FAMOUS PEOPLE	TOOLS USED	CAREERS AVAILABLE IN	CAREERS IN	SUBJECT IN SCHOOL THAT
CATEGORY	HOME ECONOMICS	COOKING	HOME ECONOMICS	SEWING	PREPARE YOU FOR HOME ECONOMICS
P					
C					
S					
E					
F					

ACTIVITY: HOME ECONOMIC ROLE PLAYING

AIM: To make the student more aware of job opportunities in Home Economics

Description: Students discuss the various areas included in the home economic cluster. From the various areas, the class can compile a list of places to visit on a field trip. Before leaving on the trip, students should prepare a list of questions which might be asked. During the field trip, students can jot down notes on information gained from the interviews. As a follow-up, the students can act out the roles of a particular job that they observed on the trip. Still another approach would be to write a letter to a friend telling him why the student is happy in that job. Students can simulate a telephone conversation between a customer who is consulting you as a person on the job.

Materials: Resource people in home economics or films might be used to reinforce this project.

ACTIVITY: CLASSROOM RESTAURANT

AIM: Student will understand the various roles involved in processes used in a restaurant

Description

Description: Through a study in class, students should identify the variety of roles, found in a restaurant. These job categories can be divided among the classmates. Depending upon the type of restaurant (pizza, Italian, short order, Mexican, taco stand, etc.) will determine the menu food preparation, advertising and logistic requests should be discussed and done in advance; also, waiters and bus boys can be instructed in proper techniques for serving. Profits from this project can be used for a class part or field trip.

Other: This activity would make a nice follow-up to a unit in business management or nutrition. A restaurant owner or business teacher would make a nice resource person.

Material: Food, paper cups, table cloths, napkins, etc.

ACTIVITY: WINDOW SHADE OR WALL HANGING

AIM: Awareness of importance of Interior Decoration in the school and home

Description: Students can decorate classroom window shades on a plain peice of material which might be hung to replace the shade. To prepare them for this project, modern sheets, towels, and curtain designs can be brought into the class. To facilitate time, several students may work together on one theme, colors, and design should be discussed. Textile crayons, or regular crayons can be used on many flat-type materials. Usually, a hot iron is used to set the crayon. If available tempera paint or textile paints may also be used. Multi-media can be employed. Experiment to see what works best on the material used.

Material: Material, window shade, crayons or textile crayons, tempera paint, or textile paint, brushes, iron, and newspaper.

ACTIVITY: SHOPPING LIST

AIM: Students will become aware of the necessity to plan a healthful menu within certain budget restrictions.

Description: Prior to the class each student will ask his parents how much they spend on groceries per week. Taking into consideration the size of their own family, the student should plan out s seven-day menu for the family. Newspapers can be used to compare prices of foods. Students should compute the cost to see if their menu fits into the budget. Compare the price list between the parents and the students. Is there any way to save money on the budget?

ACTIVITY: DEMONSTRATION OF HOME APPLIANCES

AIM: This project makes students more aware of appliances used in the home

Description: Students bring an appliance from home to demonstrate. Also, they should bring the guarantee. Prior to the demonstration, the students should discuss various aspects of the appliance. A clear and careful demonstration will "sell" the homemaker. With the guarantee, the students can explain the repair procedures.

Material: A small appliance.

ACTIVITY: GOOD GROOMING

AIM: Make the students more aware of their personal appearance

Description: Prior to this project, have students make a bulletin board of pictures which suggest a well groomed person. This can be in the areas of hair care, clothing, and skin care. Discuss what good grooming means to the student. Using the clothes of the students, compile a fashion show. Each student can describe the clothes which he or she will model. Music or dance might be used to make the show more exciting.

Materials: Resource people might be handy for this project. Models, designers, and clothing manufacturers might be used.

ACTIVITY: SCHOOL HOST/HOSTESS

AIM: Make the student more aware of social graciousness

Description: Student may host a visiting group of students. Each student can design a name tag for the visitor. As a host/hostess role, the student should show the visitor his school. Perhaps the class can also arrange a snack for the guest.

INDUSTRIAL EDUCATION

The occupational orientation of industrial arts courses calls for continuous reference to fields of work that grow out of this subject. Along with the study of products, services, processes, and equipment, the student can add to his occupational knowledge by investigating the characteristics of jobs in this field. Skilled workers are needed to keep the nation's economy growing and strong, but the demand for workers with technical skills is infrequently recognized by high school students and their parents. Young persons should be made aware of the fact that a thorough training in the skills of industrial occupations will prove a decided advantage in obtaining employment and securing promotions. The teacher will find it advantageous to plan field trips to industrial firms and schools that offer trade training. Films and filmstrip which deal with trade occupations are among the better ones available.

Display materials provide an excellent means of encouraging student explorations of occupations related to shop work. Suggestions for such things may be found in the hodge-podge section.

CAREERS RELATED TO INDUSTRIAL EDUCATION

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
B. A. or above		Sales Engineer	Mechanical Engineer Electrical Engineer Aero Engineer Air-Conditioning Engineer Automotive Engineer Civil Engineer Ceramic Engineer Industrial Chemist		Editor of Industrial Publications Reporter of Industrial Publications Teacher of Industrial Publications	Architects Artists
II High School Plus Technical	Radio & TV Repairman	Contractor Building Trades	Technician Airplane Pilot Factory Foreman Boiler Inspector Radio Operator Die Designer Draftsman		Vocational Instructor Printer	

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
III High School Graduate		Telephone Inspector	Machinist Airplane Mechanic Blacksmith Boilermaker Bricklayer Cabinetmaker Carpenter Welder Photoengraver	Crane Operator Oil Well Driller Lineman Operating Engineer	Linotype Operator Compositor	Photographer
IV Less Than High School Graduate	Bus Driver Chauffeur Dray Man Truck Driver Custodian Building Cleaner Maintenance	Multigraph Operator	Armature Winder Assembler Babbitter Blast Furnace Blower Brake Adjuster Leather Worker Airplane Cleaner Blaster Machine Operator			

ACTIVITY: CAREERS IN FIVE FOR INDUSTRIAL ARTS

AIM: To familarize students with career opportunities related to Industrial Arts

RULES: Fill in the blanks with the corresponding letters.
The letters are picked at random.
The class and category are chosen by subject matter.
The players have five minutes to complete as many blanks as possible.
For a square to be properly filled it should have a word which starts with the letter in the left hand column and must correspond with the category.

CLASS	FAMOUS PEOPLE	TOOLS USED	CAREERS AVAILABLE IN	CAREERS IN	SUBJECT IN SCHOOL THAT
CATEGORY	MANUFACTURING	ELECTRICITY	CONSTRUCTION TRADES	ENGINEERING	PREPARE YOU FOR A MANUFACTURING CAREER
P					
C					
S					
E					
F					

OCCUPATIONS

T E O P F A R M E R C H A N T C R I T B
R K F B A K E R A C E R L A W Y E R O G
E Y W K O O C R E T N I A P O R T E R X
H B A R R C I E N E R E L L E T N U M E
C B I O H X F F U A D U C C S D I V E R
T A T R P M F I R E M A N I G X R C E E
E C E E L U O E S B S R T U N L P Y U T
A F R D R E K C E H C N O M C A D D Y S
C L E R K N I R I L E W U O A H H R T I
H C I A A R W E L D E R D R D S E C T N
E E Y B S X R R I O S F M R E V O M E I
R M T S I P Y T I C B L A A I R E N I M
U W O R E K O R B T O I I R N M O D E L
T A I L O R H I O O E E D R U G G I S T
C A R P E N T E R R S R E C O R G E H R
O J U D P A G E N T N A V R E S S E R P
A M B I N D E R S A L E S M A N A G E R
C R E N U T R U S T E E R I P M U X G B
H R E J A N I T O R E P O R T E R S H T

Find the words listed below among the scrambled letters and circle. The words may be spelled vertically, horizontally or diagonally.

WORD LIST FOR OCCUPATIONS

AGENT
BAKER
BANKER
BINDER
BOXER
BROKER
CADDY
CARPENTER
CASHIER
CHECKER
CLERK
COACH
COOK
DENTIST
DIVER
DOCTOR
DOORMAN
DRIVER
DRUGGIST
EDITOR
FARMER
FIREMAN
FLIER
GROCER
JANITOR
JUDGE
LAWYER
MAID
MANAGER
MASON
MECHANIC
MINER
MINISTER
MODEL
MOVER
NURSE
OFFICER
PAGE
PAINTER
PLUMBER
POET
PORTER
PRESSER
PRINTER
RACER
REALTOR
REPORTER
SALESMAN
TAILOR
TEACHER
TUNER (Piano)
TYPIST
UMPIRE
WAITER
WELDER
WRITER

Adapted from Dell Word Search Puzzles, Dell Publishing Company, Inc., New York, New York.

MATCHING QUIZ

1. Technology
2. Ability
3. Career
4. Cooperation
5. Interest
6. Interdependency
7. Job Family
8. Leisure Time
9. Needs
10. Services
11. Specialization

A. Sill or Talent

B. Dependant on One Another

C. To Give Something Needed

D. A Person's Lifework

E. The Application of Science and Technical Advances in Industry, Manufacturing, and Arts

F. Working Together

G. Liking or Concern For

H. Jobs that are Related

I. To Have an Urgent or Essential Use For

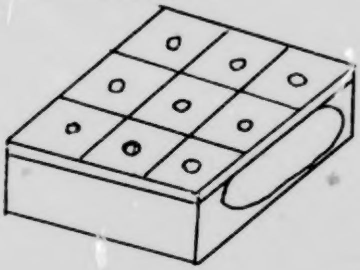
J. Free or Unoccupied Time from Work

K. To Restrict Oneself to a Special Branch or Field of Activity

Introduction

Industrial arts teachers are encouraged to incorporate the American Industries concept into their instruction. The following units are activities which will provide exploratory experience utilizing the American industry concept.

ACTIVITY: MANUFACTURING COMPANY



AIMS: Students will participate in the experience of organizing a company, manufacturing and selling a product

Students will assume a career role in the company and perform the duties associated with the job.

Description:

1. The social studies and industrial arts teachers plan the manufacturing activity to demonstrate the close relationship of the two subject areas. The industrial arts teacher concentrates on the organization and operation of the production line and the social studies teacher handles the company organization, selling stock, advertising, bookkeeping, etc.

2. The idea of forming a company and manufacturing a product is announced to students. Interested students should sign up for the elective course.

3. Students elect company officials and develop their job descriptions. Appendix A.

4. Company officials and advisers determine what product to manufacture. They select a tic-tac-toe game made of wood.

5. The company name is selected and stock is offered for sale at fifty (50) cents per share.

6. The sales plan is developed.

7. The company officials and adviser develop a flow chart for the manufacturing of the product. Appendix B.

8. Workers are assigned jobs and trained. Appendix C.

9. A specific instruction card is prepared for each work station. Appendix D.

10. Materials are ordered, prepared and stocked.

11. Manufacturing fixtures are made to speed production and maintain quality.

12. A pilot run is conducted to determine bottlenecks in the manufacturing process.

13. The actual production run is made.

14. Orders are filled and money collected.

15. Bookkeepers prepare the profit and loss statement.

16. Company officials declare a dividend for the stockholders.

17. Company is liquidated.

APPENDIX A

DUTIES OF GENERAL MANAGER

a. General supervision over entire activity
b. Train workers, assign workers to jobs
c. Check on and be responsible for product quality and manufacturing efficiency
d. OK bills to be paid by office manager. OK purchase orders before making purchases
e. Prepare and submit reports as required by your advisors
f. Cooperate with your advisors and other company officials
g. Inspector

DUTIES OF OFFICE MANAGER

a. Maintain attendance records. Check absentees for valid excuses
b. Keep company's financial records
c. Keep a record of all money received on RECEIPTS page of record book
d. Pay all bills, invoices previously OK'd by your general manager
e. Keep stock sales and ownership records
f. Cooperate with your advisors and other company officials
g. Keep daily history on record

DUTIES OF PURCHASING AGENT

a. Check with advisors relative to materials and supplies needed to manufacture product
b. Arrange to have stock certificates, purchase orders and other forms needed run off on duplicator.
c. Have purchase orders OK'd by general manager before issuing order
d. Obtain materials required from school stock or purchase from outside source
e. Cooperate with advisors and other company officials

DUTIES OF SALES MANAGER

a. Plan sales program:
    1. Help decide price of product
    2. Where and how to sell product
    3. Recruit salesmen
    4. Advertisement, posters, artwork
    5. Help sell stocks
    6. Coordinate sales department with production

b. Cooperate with advisors and other company officials

DUTIES OF SAFETY DIRECTOR

a. Enforce all safety rules
b. Stop all horseplay and call attention to undesirable conduct
c. Be alert to hazards
d. Take steps to eliminate possible accident causes
e. See to it that equipment and tools are in good operating condition
f. Check to make sure machine guards are in place and students are using eye protection and protective clothing as specified by advisors
g. If someone is injured, even slightly, contact advisors immediately .
h. Cooperate with advisors and other company officials
i. Help general manager inspect product, final assembly

APPENDIX B

LITTLE BUC'S MANUFACTURING COMPANY

ASSEMBLY LINE FLOW CHART

PLAYING BLOCK

STEP	
1	SAW BLOCK TO SIZE BAND SAW
2	DRILL STORAGE HOLES DRILL PRESS
3	SAND SURFACES BELT SANDER
4	SAND CORNERS DISC SANDER
5	INSPECT
6	STAIN
7	DRILL PLAYING HOLES DRILL PRESS
8	SAW LINES TABLE SAW
9	INSPECT
10	VARNISH

TIC TAC TOE GAME

	STEP
SAW COVER TO SIZE SCROLL SAW	1
DRILL CENTER HOLE HAND DRILL	2
SAND EDGES BELT SANDER	3
INSPECT	4
VARNISH	5

ASSEMBLE

FINAL INSPECTION

SELL AND DISTRIBUTE

ACTIVITY: SIGNS, INC.

AIMS: The student will participate as a productive member of the group.

The group will manufacture and distribute a product.

The student will be able to list at least three factors to consider when organizing and operating a manufacturing business.

Several students will become leaders and direct the production line.

The student will be able to list three jobs associated with manufacturing.

The student will assume at least three different occupational roles during the activity. (assembly line worker, supervisor, inspector, etc.)

Description:
1. Formation of the company. Teacher is chairman of the board. Students act as the Board of Directors.

2. The Board of Directors decide on a product to manufacture. The teacher guides the group in this selection. The following limitations are considered:
   a. Are the other members of the class interested in this project?
   b. Does the project serve some useful purpose?
   c. Can it be made with standard equipment and tools?
   d. Are there any parts that can not be so made?
   e. Can these parts be purchased?
   f. Does it lend itself to mass production methods?
   g. Is the project saleable locally?
   h. Does it infringe on any existing patent?

3. Students are organized into several production engineering groups to develop prototypes. Records are kept of the materials used and a cost estimate is made.

4. The groups present their solution with job breakdown and operation breakdown.

5. The final design is selected and a flow chart developed.

6. The foreman and quality control personnel are assigned.

7. Assembly line workers are assigned and trained.

8. Tooling up is completed. A test run is conducted.

9. The bulk materials are stock piled.

10. The production line is operated. Strict attention is paid to quality control.

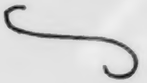
11. Sales campaign is conducted. The advertising group prepares posters and gives sales talks to class groups. Orders are accepted with payment on delivery.

12. Profit and loss statement prepared.
    Signs, Inc. sold more than seventy signs at $2.25 each for a tidy profit.

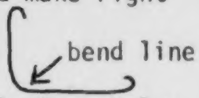
PROCEDURE - For Manufacturing Sign

1. Measure and cut strips of 5/8" band iron.
   1 - 33"   1 - 23"

2. Make end bends on both pieces with 1 1/2" inside diameter. Use bending machine. Be sure to make bends on opposite sides.

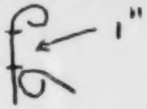


3. Measure 7 1/2" from one end of long piece and make right angle bend using bending machine.



4. Place metal pieces together in vise and drill rivet holes through both pieces at once. Leave 1" clearnance for screwdriver between pieces at top.

   Rivet pieces together using pop rivets.



5. Drill screw holes and sign holes as indicated on diagram.

6. Cut wood to 12" length.
7. Trace layout of design on wood using template.
8. Cut out design using band saw.
9. Sand edges of wood.
10. Stain wood.
11. Spray paint scroll work.
12. Attach screw-eyes and S hooks.

BILL OF MATERIALS FOR SIGN

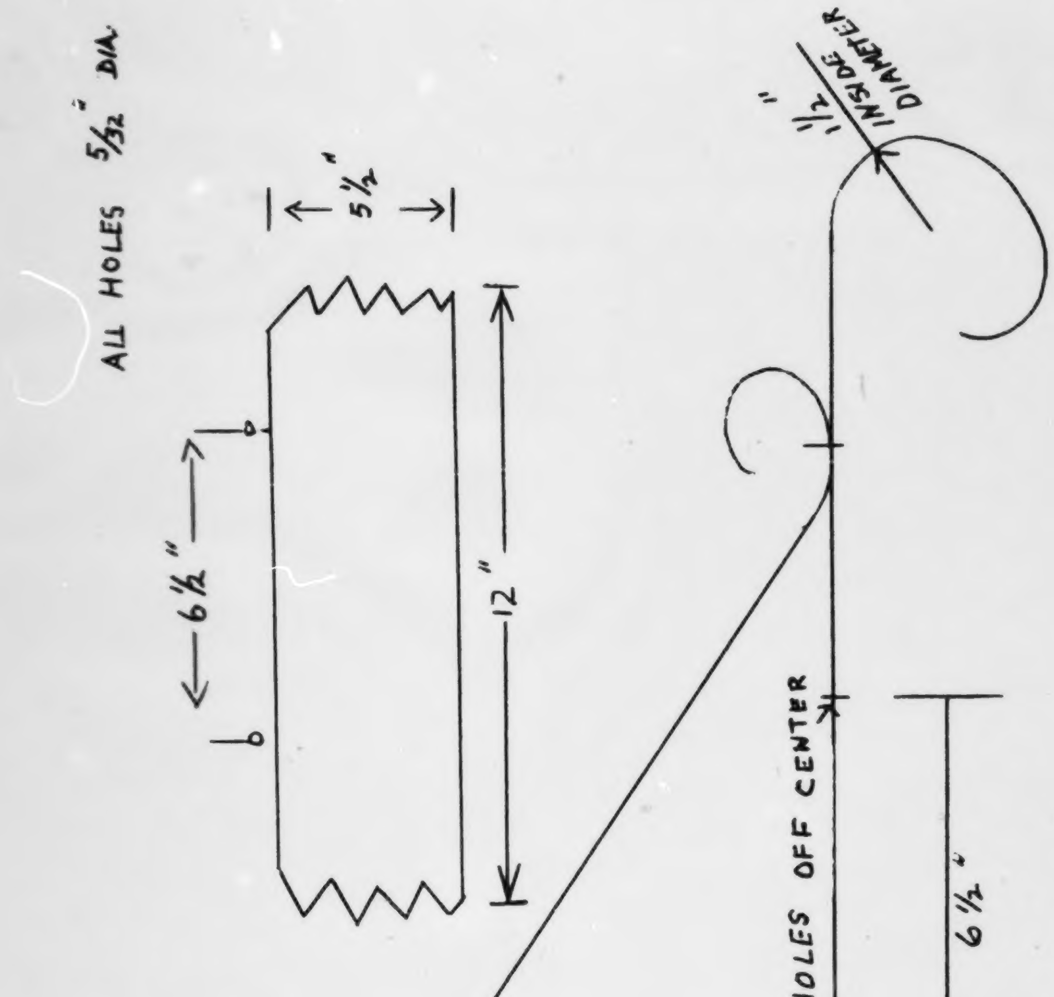
5/8" wide steel band, 1 piece 33" long, 1 piece 23" long

2 S hooks

2 screw-eyes

Wood 1 x 5 1/2" x 12"

pop rivets, spray paint, wood finish


ALL HOLES 5/32" DIA.
5½"
← 6½" →
12"
1" CLEARANCE
2¼
1¼
4
5/32" HOLES OFF CENTER
6½"
4"
1½" DIAMETER
1½" INSIDE DIAMETER

JOBS IN YOUR FUTURE

Objective 1, 2:

1. Demonstrate your understanding of jobs in your future by filling in the blanks to the program

2. Check your answers with the column on the right and correct if necessary. What will you be doing tomorrow, five years, ten years from now?

	COVER COLUMN WITH SHIELD
1. The right kind of job for you depends on what you like to do. The right job depends on what you ____________ _____ _________.	Like to do
2. Your Career Education Exploration course helps you to find out what some of your interest are. Your new course helps you to find what your ___________ are.	Interests
3. Most successful people working do the type of work they can do best. The best work you can do is the work you do ___________________.	Best
4. Your aptitude tells you what you can learn to do best. Your _____________ shows you what you can learn to do best.	Aptitude
5. Your personality tells you what you like to do. What you like to do depends on your __________________.	Personality

	COVER COLUMN WITH SHIELD
6. After you've gotten your diploma, look for a steady job. The best job after graduation or college is a __________ job.	Steady
7. First, ask your counselor for a test to help you find what you like to do and what you can learn to do best. To help you find your interests ask your ______________.	Counselor
8. Once you find a job you may like to do, read a book or information about it. ________ a book or ____________ about a job you may like to do.	Read Information
9. Talk to someone you know working in that job to find out what he does. To find out what a particular job is about talk to __________.	Someone

LANGUAGE

ARTS

PERUSE! USE!

LANGUAGE ARTS

Language Arts can be a curricular focal point to integrate classroom activities into the concepts of Career Education.

Writing as a learning skill can be an important factor in any vocation. Taking notes on first-hand observations is an important element of the scientific method. These notes enables us to see the parts in relation to the whole, to see the inter-relationships among the parts, to see the structure, or to organize a meaningful structure from the recorded observations.

Since reading and listening are forms of observing, taking notes on our reading and listening can provide the same benefits as taking notes on first-hand observations. Taking notes, then, enables us to see meaningful relationships; seeing meaningful relationships enables us to understand; understanding enables us to remember; and remembering enables us to see relationships between past experiences and new experiences. Thus note-taking (writing) can be extremely helpful in all activities in school and out of school, in all vocations now and in the future, in developing to the fullest extent the potentialities of all our youth.

It is helpful when students see that success in the language arts has a direct bearing upon many careers; e.g., journalist, librarian, stenographer, printer, announcer or commentator, as well as the professions of actor and author. Students are able to put journalism techniques into practice in their interviews with persons employed in various occupations. Reports of occupational investigations might be organized into a class career book, thus affording an opportunity for practical experience in editing.

One English teacher successfully combines a study of vocations with the study of vocabulary. She works with her students in developing clear meanings of such descriptive words as optimist, idealist, realist, politician, humorist, sage, and the like. The word meanings are then reinforced by discussing vocations which would demand some of these qualities. A typical discussion, for example, might center around "Which of these qualities does a secretary need?"

CAREERS RELATED TO LANGUAGE ARTS

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I B. A. or above	Reading Specialist Speech Therapist	Advertising Manager Public Relations Sales Engineer Traffic Manager	Technical Writer	Sports Writer	Lawyers Editor Clergyman English and Language Art Teacher Foreign Correspondent Tutor Journalist	Lecturer Author Continuity Writer Actor Dramatic Critic Scenario Writer
II High School Plus Technical	Interpretor Translator	Retail Manager Salesman Sales Person Secretary	Cryptographer		Radio Announcer Reporter Librarian	Script Writer
III High School Graduate	Customs Inspector Immigration Inspector	Auctioneer Demonstrator Buyer Floorwalker Sales Clerk Foreign Exchange Clerk Stenographers	Telephone Operator Printer			Copy-Writer
IV Less Than High School Graduate	Hostess Usher				Proofreader	

The following activity pages are grouped into Skill Activities, Specific Subject Activities, and General (overlapping) Activities and projects.

HEY!

Please Use These Ideas! Students will be involved in interesting--even fun-learning experiences. Also, you have some ready-made replies to their questions of relevancy: Hey, how come I gotta learn this?

SKILL ACTIVITIES

ACTIVITY: GIVING AND FOLLOWING DIRECTIONS

AIM: To show the students the difficulties in explaining a simple task

Description: In many job situations, the begining worker needs training to perform certain tasks. Learning to give and follow directions are a necessary language skill.

Have students tell each other how to tie their shoe laces. Caution the "doer" to follow the directions of the "speaker" exactly; take nothing for granted.

As a follow-up, try writing the instructions.

Relate these activities to learning skills for jobs.

Materials: Students who are wearing tied shoes.

ACTIVITY: FILLING OUT JOB APPLICATION FORMS LEGIBLY

AIM: To acquaint students with actual forms and to use clear handwriting in following written directions

Note: There are many follow-up activities that stem from this study:

a. Vocabulary of Terms
b. Discussion of Minors in the World of Work
c. The Language of the Legal Document
d. Discussion of How Unique Each Child's Application Is--He is an Individual
e. Why is Correct Spelling Important in Filling Out an Application

Arkansas Department of Labor Telephone: 371-1401
Capitol Hill Building---Little Rock 72201

APPLICATION FOR EMPLOYMENT OF MINOR

Section I STATEMENT OF PARENT, GUARDIAN OR CUSTODIAN
(This statement must be completed by the parent, guardian or custodian of this child and signed by the parent, guardian or custodian, and also by the child).

_______________ Arkansas, _______________, 19___
(City or Town) (Month and Date)

I, the undersigned, hereby affirm that I am the _______________
(Parent, Guardian or Custodian)

of _______________, now residing at
(First Name) (Middle Name) (Last Name)

____
(Give Street and Number, City, County, State, Zip Code)

and that _______ is the _______ child of _______________
(He or She) (1st, 2nd, etc.) (Father's Name in Full)

_______________ and _______________
(Mother's Maiden Name)

and was born in _______________, _______________, _______________
(City) (County) (State)

on the _______ day of _______________, 19___, and is now ___ years of age.
(Month)

School last attended _______________, _______________, in _______
(Name of School) (Location) (Years)

Grade completed _______________

Child will be employed by _______________
(Give Name of Firm and Address)

as _______________
(Occupation of Minor)

and I am willing that ______________ be so employed, and ask that
(He or She)

an employment certificate be issued to said child as provided by law.

____
(Signature of Parent, Guardian or Custodian)

____
(Address of Parent, Guardian or Custodian)

Signature of Child:

____
(Child Must Sign Own Name Here)

Take Advantage of Our Free Employment Services
Contact Your Local Office of Our Employment Security Division

Section 2

INTENTION TO EMPLOY (This form is to be filled out by Employer)

Date____________________, 19______

The undersigned intends to employ:

____
(Name of Minor) (address of Minor)

in the capacity of______________________________________
(Specific Occupation)

in the____

for_________days per week, _______hours per day, beginning

__________A. M. and ending _________P. M.*

Full-time employment during school hours)(Cross out statement
Part-time or vacation employment only) which does not apply)

____
(Name of Employer) (Business Address)

The undersigned intends to employ the above-mentioned minor immediately upon receipt of a certificate issued by the Arkansas Department of Labor and agrees to comply with the provisions of the Arkansas Statutes and the Fair Labor Standards Act relating to the employment of minors.

*This information Must be provided.

____
(Signature of Employer or Authorized Agent

Section 3 RECORD OF PROOF OF AGE

County or City of____________________Date______________, 19______

Child____
(Name) (Address)

____
(Father's Name in Full) (Mother's Maiden Name)

Date of birth shown on record_________________________Date of
(Month) (Day) (Year)

original issue____

Age shown on record_____Place of birth_______________________________
(City) (County) (State)

Proof presented with this application.

______(a) Birth Certificate

______(b) Record of Baptism or Confirmation

______(c) Bible Record

______(d) Passport or Certificate of Arrival in the United States

______(e) Insurance Policy at least one year old

______(f) School Record

______(g) Draft Registration Certificate

1.____
(Place of Issuance, Town and State)

2.____
(Number of Other Identifying Information)

3. If birth certificate, give Vital Statistics File Number________

I hereby certify that I have examined and approved the above evidence of age and that it has been in existence at least __________________years.

*

(Name and Address of Office) (Signature of Person Making This Record)

*If birth date is verified by a notary public, county clerk, or other public official, the appropriate seal must appear at this place.

SKILL ACTIVITIES

ACTIVITY: LISTENING CAREFULLY AND FOLLOWING DIRECTIONS

AIM: To give students practice in giving and following accurate verbal directions

Materials: Paper, pencil, prepared pictures.

WHATZIT

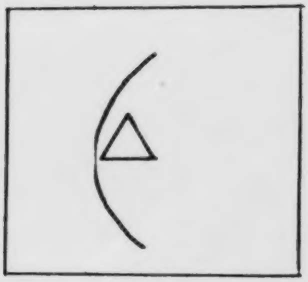
The following pictures are for use in giving direction and/or listening exercise.

Have one student look at the picture (without the others seeing it) and give verbal directions for drawing the picture. He may not tell what the object is or what it is used for. Descriptive terms only may be used; such as; beginning three inches from the left hand side and two inches from the top draw a line one inch to the right; place your pencil in the middle of the page four inches from the top, draw a vertical line to within one inch of the bottom of the page; starting one inch up from the bottom of the page and two inches from the left hand side draw a line approximating one o'clock to the center of the paper; etc. No questions may be asked and there should be no discussion until the activity is completed.

At the conclusion of the exercise all papers may be shown and a discussion conducted concerning the directions--how they might be more explicit, more easily understood, what was helpful and the object or picture itself.

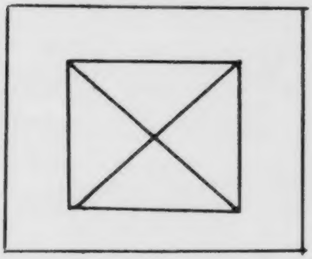
START SIMPLE

1.



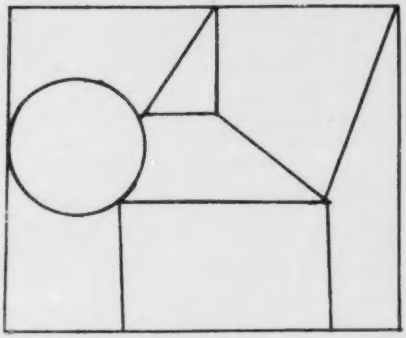
Sheet of paper - any size

2.



. . . PROGRESS

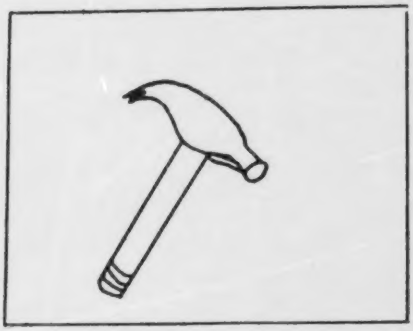
3.



Have fun!
Invent others!

Use a sketch of an object

4.



Hammer, etc.

SKILL ACTIVITIES

ACTIVITY: LIBRARY SKILLS

AIM: To bring job classification and employment information to students through a development of library skills

Description: Working with the media specialist, the teacher can orient the students' study toward their career education. Teachers can choose almost any topics of investigation for their students' library exploration. So--Why not choose jobs?

Materials: For a start, use the list of occupations in this book's "Hodge-Podge" Section. This list leads directly to studies of:

a. Classification
b. Card Catalogue
c. Reference Sources

Note: Students can investigate the wide range of specialist librarians, who work in so many specific areas.

SKILL ACTIVITIES

ACTIVITY: INTERVIEWING

AIM: To use an exploration of jobs as a tool to learn interviewing skills

Description: Students interview a parent, teacher, or other worker and fill in the form. Any unanswered blanks can be researched (i.e., Where can these jobs be found). Follow up activities could include:

a. Organizing an outline of the material
b. Writing a resume as if the student were this person applying for a subsequent job.
c. Students can be assigned specific job titles--or let them choose one of their own interest. Then they can research the answers.

Materials: The following form and pencil.

INTERVIEW FORM

POSITION OR TITLE

JOB DESCRIPTION

NUMBER OF YEARS IN PRESENT OCCUPATION

AMOUNT OF REQUIRED FORMAL EDUCATION

WORKING CONDITIONS

IS YOUR WORK ANY DIFFERENT THAN IT WAS TEN YEARS AGO? HOW? (Different Equipment or Tools, Easier?)

WHAT HAS MADE THE DIFFERENCE? (Inventions, Technological Improvements)

IS THERE ANYTHING YOU COULD HAVE DONE BEFORE YOU STARTED YOUR CAREER THAT COULD HAVE MADE YOU MORE SUCCESSFUL?

WHAT SCHOOL COURSES DO YOU FIND MOST USEFUL IN YOUR WORK?

HAVE YOU HAD TO RETURN TO SCHOOL TO RECEIVE ADDITIONAL TRAINING SINCE YOU BEGAN WORKING?

WHAT OTHER JOBS ARE OPEN TO YOU?

WHAT DO YOU LIKE TO DO IN YOUR SPARE TIME?

WHAT DO YOU LIKE BEST ABOUT YOUR JOB?

WHAT DO YOU LIKE LEAST ABOUT YOUR JOB?

IF YOU HAD TO CHOOSE AGAIN WOULD YOU CHOOSE THIS JOB?

WHERE ARE THESE TYPES OF JOBS FOUND?

WHAT ARE THE HOURS AND EARNINGS?

HOW WOULD YOU FIND A JOB IN THIS FIELD?

SKILL ACTIVITIES

ACTIVITY: VOCABULARY

AIM: Using a list of personality traits as vocabulary terms, the teacher and student can discuss characteristics required for various jobs.

Materials: Vocabulary List

Note: Concurrent activity:

1. Number each word.
2. Ask each student to pick his own characteristics from the list. Example: (2, 3, 5, 17, 19, 20)
3. Teacher compiles a class list of numbered "secret people". (no names)
4. Pass out list and see if the students can fill in each others names.

PERSONALITY TRAITS

ABRUPT:	Blunt, Plain-spoken
ABSENT-MINDED:	Habitually Forgetful
AFFECTIONATE:	Tender and Loving
AGGRESSIVE:	1. Boldly Hostile; Quarrelsome. 2. Bold and Active; Enterprising
AGREEABLE:	Pleasing; Pleasant
ALOOF:	Cool; Reserved
AMBITIOUS:	Strongly Desirous; Eager
AMIABLE:	Good-Natured; Friendly
AGRUMENTATIVE:	Apt to Argue
ARROGANT:	Full of Pride; Haughty
BASHFUL:	Showing Social Timidity; Shy
BOLD:	Daring; Fearless
BOSSY:	Inclined to Play Boss (Boss: Master or Superior)
BRIGHT:	Lively, Cheerful

CARELESS:	1. Not showing due care. 2. Without Care, as, indifferent
COMPLAINER:	One Who is Dissatisfied
CONCEITED:	Vain
CONFIDENT:	Sure of Oneself
CONSIDERATE:	Given to Care; Observant to Rights and Feelings of Others; Showing Thoughtful Kindness
COURTEOUS:	Polite; Gracious
CREATIVE:	Inventive
DEPENDABLE:	Trustworthy, Reliable
DETERMINED:	Having One's Mind Made Up
DISHONEST:	Not to be Trusted
EAGER:	Impatient or anxious
EASY-GOING:	Having a Comfortable Gait; Taking Life Easily
EMOTIONAL:	Easily Aroused to Emotion
ENERGETIC:	1. Having Energy (Energy: Force Strength). 2. Active Eager;
ENTHUSIASTIC:	Interested; Eager
FORWARD:	Bold; Presumptuous
FRIENDLY:	Kindly Disposed; Not Hostile
GAY:	Joyous; Lively
GENEROUS:	Willing to give or share; Unselfish
GENTLE:	1. Refined; Polite. 2. Generous; Kinda
GREEDY:	Wanting Excessively to Have or Acquire
HONEST:	1. Trustworthy; Truthful. 2. Showing Fairness and Sincerity
INDUSTRIOUS:	Characterized by earnest, steady effort; Hard-Working
INQUISITIVE:	Inclined to ask questions; Curious
JEALOUS:	Suspiciously watchful; Intolerant of Rivalry
KIND:	Sympathetic, Gentle, Benevolent
LAZY:	Not Eager or Willing to Work
LOYAL:	Faithful to the Lawful Government; True to any Person to Whom one owes Fidelity; Constant

NEGATIVE:	Expressing Denial or Refusal
OBSTINATE:	Unreasonably Determined to Have One's Way
OPPORTUNIST:	One Who Thinks or Does Something Without Regard For Principles.
ORDERLY:	Well-Behaved
OVERSENSITIVE:	Very Sensitive
PATIENT:	Bearing or Enduring Pains, Trials, or the Like Without Complaint; Able to Bear Strain, Stress, Etc.
PERSERVING:	Doing Things in Spite of Difficulty
PERSISTENT:	Continuing, Especially in the Face of Opposition
POISED:	The Bearing of the Body or Head; Carriage
POSITIVE:	Having the Mind Set; Confident
RELIABLE:	Dependable
RUTHLESS:	Without Pity or Compassion
SARCASTIC:	Uses Stinging or Cutting Remarks
SELF-CENTERED:	Concerned only with One's Affairs; Shelfish
SENSITIVE:	Easily Offended; Touchy
SHORT-TEMPERED:	Having a Quick Temper
SHY:	Easily Frightened; Timid
SILLY:	Happy, Good; Lacking in Sense; Foolish
SINCERE:	Without Deceit or Pretense
SOCIABLE:	Friendly
STABLE:	Firm in Character, Purpose, Etc.
SULLEN:	Showing Ill-Humor and Resentment by Withdrawal; Gloomy; Dismal
STUBBORN:	Persistent; Obstinate
STUDIOUS:	1. Given to or Pursuing Study. 2. Diligent in Attention; Carefully Ernest
TACTFUL:	Knowing How to do or Say the Right Thing Without Offending
THOUGHTFUL:	Considerate
TOLERANT:	Inclined to Tolerate Other's Beliefs

SPECIFIC SUBJECT ACTIVITIES

SPEECH - DRAMA - DEBATE

ACTIVITY: PANTOMIME EXERCISES

AIM: Nonverbal communication is an intregal part of the language arts, and skills of this nature are necessary to jobs in the areas of the performing arts.

Description: Everyone enjoys this one! It can be utilized in several ways.

1. Each student is assigned one pantomime. The others do not know which one; they haven't even seen any of them. "Actor" tries to get "audience" to understand his "act".
2. All students have the lists. Assign one number (secretly) to each student performer. One by one, each student acts. The rest of the class writes actor's name by the correct number.

Materials: The following exercises:

PANTOMIME EXERCISES

1. Go through a huge pile of clothes looking for a lost sock. You can't find it.
2. You are blind. Feel your way around an unfamiliar room. Someone's after you.
3. Chase a frog. Catch it. Hold it carefully.
4. You are sitting in a movie. Someone spills a coke down your back.
5. Listen carefully to a low sound and try to decide what it is.
6. You are at home alone. You hear scary foot steps in the next room.
7. Come home from school and smell cookies baking in the kitchen.
8. You are reading a book. You come to something mildly amusing. Then it gets a little funnier. It gets funnier and funnier until it really cracks you up.
9. You are painting your room. You spill some paint on the carpet. You hear your mother coming.
10. You are washing dishes. Someone has played a joke on you by hiding a mouse trap in the suds. Suddenly it catches you on the finger.
11. While getting ready for school, you accidentally mistake hair cream for toothpaste.
12. You are walking alone on a dark, spooky night. You wander into a graveyard.
13. A friend makes you a dog food sandwich for a joke. You take a bite and munch a while before you realize something is wrong.
14. You are a fashion model. You have to model. You have to model a suit of armor that is so heavy you can hardly walk.

15. A friend has sneaked a raw egg into your back pocket. You sit down.

16. You have a date who's suppose to meet you at a bus stop. You wait and wait. He/She never shows up.

17. You're telling a friend a real spicy piece of gossip. You are so taken up with your story that you lean back and put your hand on a hot stove.

18. You're trying to study for a big test the next day. Your brother or sister keeps turning up the record player.

19. You get in an elevator. It goes up several stories and gets stuck between floors.

20. You are chewing gum in class. You cough and the gum gets stuck to your fingers. The teacher is glancing in your direction. You try desperately to get rid of the gum, but it gets stuck worse and worse.

21. You see a baby bird that has fallen from its nest. You carefully pick it up and gently put it back. A cat walks up looking hungrily at the bird. You try to stay between the cat and the tree. Finally you chase the cat away.

22. The best friend you ever had is leaving on a plane. You watch him or her walk out and climb the loading ramp. The huge jets roar--the plane thunders away, takes off, and gets smaller and smaller until it's just a tiny speck in the air.

23. You come out of a dark movie into the bright sunlight. You seem to have forgotten where you parked your bike. As you look around it gradually dawns on you that someone has stolen it. You get that scary, panicky feeling in the pit of your stomach. You look frantically around.

24. Someone who has been very mean to you walks by.

25. A relative is having a very serious operation. You are waiting anxiously. The doctor comes out and tells you he's all right.

26. You walk into a friend's house. No one is at home. You see something on a table that belongs to him or her. You want to take it. You pick it up. No one would ever know. But he's your friend. But he's sometimes mean to you. It's wrong to steal. You are torn between friendship and greed. You finally decide to do the right thing. You slowly replace the object. Then you feel good.

27. You're walking barefoot in soft, deep grass. Suddenly you step on the sharp stones of a gravel driveway. Then you get out of the driveway on to a side walk. It's blistering hot from the sun. You jump back into the cool, soft grass.

28. You are sewing. You stick yourself with the needle.

29. You are visiting a foreign friend. His mother serves you a strange food you've never seen before. It looks icky. You're careful, but you taste it. You don't want to hurt their feelings. You take another bite. Boy! Is that good!

30. You're walking in the woods. You run into a skunk and he lets you have it!

31. You take a big gulp of hot chocolate and burn your tongue. You get out an ice cube to put on the burn, but then it hurts your finger.

32. You pick up a baby kitten. It is wild and bites and scratches you.

33. You see a friend walking in front of a car. You see him get hit.

34. Open an old chest and find a skelton!

35. Bathe a most unwilling and angry cat.

36. Drive a nail--hit your thumb.

SPECIFIC SUBJECT ACTIVITIES

SPEECH - DRAMA - DEBATE

ACTIVITIES: Many Suggestions

AIM: Skill development in language arts

Description: With a minimum of adaptation, these activities can be associated with careers. Remind yourself to "keep careers in mind"

Note: Some activities are very simple; others are more complex. Teachers can choose those most appropriate to his class.

1. Have each student stand in front of class and count the number of people present (silently).

2. Have each student stand in front of the class and state his name and address.

3. Plan an execute the preparation and eating of a fruit.

4. Say a word and pantomime a word that rhymes with the given word.

5. Discuss talking, screaming (use of facial and throat muscles).

6. Play charades (use song titles, movies, etc., anything familiar to your students).

7. Identify a conflict situation and act it out with a small group.

8. Have each student select a short story; read to class and translate into a drama.

9. Dramatize vocational scenes.

10. Have students create a story and translate into a drama.

11. In groups of five or six select one of the dramas to produce. Appoint crews, rehearse, present to class. Class evaluation and group evaluation.

12. Read short story into tape recorder. Listen in pairs and evaluate each other's reading.

13. Write individual short stories and tape.

14. Design and construct puppet stage. Write dramas. Make puppets and costumes. Produce.

15. Class discussion on commercials (purpose, content, approach, etc.)

16. Have students analyze two commercials.

17. Write Individual commercials and tape.

18. Debate and discussion topics can include:

    a. Advantages and disadvantages of various jobs.
    b. Social "rank" of jobs.
    c. Government control and regulation of industry.
    d. Automation and technology and changes in employment.

19. Keep careers in mind.

SPECIFIC SUBJECT ACTIVITIES

COMPOSITION

ACTIVITY & AIM: Writing Career - Based Compositions

Description: Teachers of composition have a variety of topics from which to choose when assigning writing activities. Why not use careers?

1. What's it like to be?
   (exist, live, etc.)

2. What's it like to be a _________?
   a. Parent
   b. Pilot
   c. Secretary
   d. Senator

3. The day no one worked.

Composition skills and techniques can be based on careers.

THINK ABOUT IT !!!!

GRAMMAR

Oh, yes, Career Education can be related to Grammar, even. Copywriters and editors -- what do they do? How come they gotta know grammar?
Poor grammar and usage can influence attitudes and opinions of the employee . . . from his employer . . . from his co-workers.

HOW? WHY? TALK IT OVER?

In using basic parts of speech and sentence patterns, choose occupational examples and terminology. Why not?

Instead of: THE BOY HIT THE BALL.
Why not: THE ELECTRICIAN WIRED THE HOUSE.
THREE MECHANICS CHANGED THE SPARKPLUGS AND ROTATED THE WHEELS.

SPECIFIC SUBJECT ACTIVITIES

SPEECH - DRAMA - DEBATE

ACTIVITY: COMMUNICATIONS

AIM: Students become aware of jobs in the communications field

Materials: Following form; pencil

Follow-up activities can include research or discussion of:

1. Where do these people work?
2. What training have they had?
3. To what jobs can these people advance?

COMMUNICATIONS OCCUPATIONS

W R I T E R K L O Z A L C R I T I C M O I S O A

A P T A O E O C L E R T U L K Z Y O T L I I S N

C R O C Z P L O O X T F Y E J F T R L T L N J N

R U U T C O L U M N I S T C Z O C R A A L S A O

R Z J O U R N A L I S T P T O T A E R L U T T U

E Z X R M T N O P B T V W U Y T T S R O S R P N

S O O T L E D I T O R O T R O O U P S E T U E C

S I N T E R P R E T E R R E T R E O L E R C L E

A Q W E R T Y U I O P L K R T R A N S L A T O R

P S T O O Z A E R T P U B L I S H E R T O R Z K

T S O H K L R T N M B M H V R H T N R N R H M P

A S D F O H G J K L M N B V C X Z T E A C H E R

Q W E R T R N E W S B O Y Y U I O P M N M B X T

WORD LIST

WRITER
REPORTER
COLUMNIST
JOURNALIST
EDITOR
INTERPRETER
AUCTIONEER

PUBLISHER
CRITIC
CORRESPONDENT
TEACHER
TRANSLATOR
ANNOUNCER
ACTOR

LECTURER
ARTIST
ILLUSTRATOR
ACTRESS
INSTRUCTOR
AUTHOR
NEWSBOY

FIND THE WORDS LISTED ABOVE AMONG THE SCRAMBLED LETTERS AND CIRCLE.

THE WORDS MAY BE SPELLED VERTICALLY, HORIZONTALLY OR DIAGONALLY.

GENERAL ACTIVITIES

Here is a list of some overlapping projects and activities associating careers with the language arts program.

Peruse! Use!

Review the four main areas of the language arts program--listening, speaking, reading, and writing--and ask the students to discuss how these tools can be used to obtain information regarding careers. The class may list ways of gathering career information under the appropriate language arts headings. The students may develop a list that looks something like the following:

A. Listening
   1. Tape Recordings
   2. Records
   3. Work Sounds
   4. Films
   5. Filmstrips
   6. Workers' Talk

B. Speaking
   1. Interviews
   2. Role Playing
   3. Skits
   4. Debates
   5. Discussion
   6. Oral Reports

C. Reading
   1. Career Books
   2. Work Kits
   3. Library Books
   4. Magazines
   5. Newspaper
   6. Textbooks
   7. Pamphlets
   8. Occupational Briefs

D. Writing
   1. Letter
   2. Write Newspaper Articles
   3. Write Want Ads
   4. Career Notebooks
   5. Preparing Graphs and Charts
   6. Making Scrapbooks

Have students ask their parents to name their friends and tell how they met them. Discuss in class.

Explain why a good job at sixteen years of age may be a poor job at thirty.

On the basis of human goals and needs, make judgments about the events that led to your parent's selection of a job. Consider the issues from the viewpoints of self, family, and society.

Debate social ranking professional and trade jobs.

Have each student select an occuption he would like to have and tell why; select one he wouldn't like and tell why. Use tape recorder.

Discuss value system.

Use the word "value" in a variety of sentences.

Have each student tell what work they don't like and why; what work they like and why.

List values often associated with certain job families.

Hold up a series of objects, one at a time, from a paper bag (Mirror, Crayon, Hammer, Record, Book, etc.) Have students write down the one they would choose. Have students relate their choices and tell why. Discuss the influence of values.

Play tape recordings of jobs students selected and analyze how values played a part in selection.

Have students write what jobs they would consider if:

a. Power were important to them
b. Respect to others were important to them
c. Affection of others were important to them
d. Producing a good product were important to them

ACTIVITY: LANGAUAGE ARTS GAME

AIM: Synthesis of language arts and careers

Materials: Following game model and directions

Note: Can be modified beautifully for use over and over.

CAREERS IN FIVE FOR LANGUAGE ARTS

ACTIVITY: CAREERS

AIM: To familiarize students with career opportunities related to Language Arts

Rules: Fill in the blanks with the corresponding letters. The letters are picked at random. The class and category are chosen by subject matter.

The players have five minutes to complete as many blanks as possible. For a square to be properly filled, it should have a word which starts with the letter in the left-hand column and must correspond with the category.

CLASS	FAMOUS PEOPLE IN	TERMS USED IN	CAREERS AVAILABLE IN (PLACE)	CAREERS IN (A LANGUAGE, ARTS FIELD)	SUBJECT IN SCHOOL THAT
CATEGORY	LITERATURE (or performing Arts)	GRAMMAR (or Literature)	NEWSPAPER OFFICE	ENGLISH (or Speech)	PREPARE YOU FOR ACTING
P					
S					
E					
M					
F					

GENERAL ACTIVITIES

ACTIVITY: MORE IDEAS!

1. Greeting Cards - A Unit
   Writing Verse
   Language Usage
   - a. Spelling, Vocabulary
   - b. Puns, Similies, Etc.

   Art Department could assist in sketching cartoon's colors, etc.
   Could be sold - Bring in business aspects
   Some people do these activities as their job! Imagine!

2. A well-planned and organized field trip to a radio station could be a perfect way to show the synthesis of language arts and occupations.

3. A writing unit could plan and develop a community. Start with a vacant lot and end with an entire community.

CAREERS RELATED TO MATHEMATICS

There are various instances in which mathematics can be applied directly to the work involved in various careers. A possible introductory unit would have each student investigate a job cluster and determine ways in which math is used in jobs. The student could construct a chart illustrating the information. He could select a job based on his interests and contribute to a class display.

In addition, the teacher could have presented a visual display of posters on job opportunities relating to math. One source is J. Weston Walch, Publishers, Portland, Maine, 04104.

Following are various activities relating to several units studied in middle school math. They are merely suggestions to show the practical application of math to job careers.

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
1 B. A. or above	Corp Statement Analyst Reorganization Advisor Tax Expert Marketing Expert Psychometrist	Investment Advisor Banker System Analyst Computer Programmer Econometrician Bursar Accountant Public Statistician Actuary	Astronomer Physicist Mathematician Engineer, Electrical Etc. Research	Navigation Civil Engineer	Economist Teacher, Mathematics Sociometrician	Architect

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
II High School Plus Technical	Tax Collector Airplane Inspector	Collection Manager Appraiser Auditor Bank Examiner Office Manager Sales Manager	Contractor Machine Designer Radio Operator Draftsman Tool Designer Optometrist Lab. Asst.	Surveyor		Motion Pictures (Audio)
III High School Graduate	Assessor Actuarial Assistant	Statistical Clerk Cashier Bookkeeper Ticket Agent Broker's Clerk Cost Clerk Budget Clerk Secretary to Accountant Teller Billing Clerk	Tool Maker			
IV Less Than High School	Machine	Card Punch Operator Computing Machine Operator Sales Clerk				

ACTIVITY: WHOLE NUMBER OPERATIONS

AIM: To show the student how basic operations of addition, subtraction, multiplication, and division are related to various occupations

Description:

1. Given monthly income and size of a family have the student determine:
   a. Needs categories for the family (housing, food, transportation, etc.)
   b. Amount of money to be allocated for each item.
   c. Monthly budget that includes provisions for the establishment of an emergency fund.
2. Bring in a respresentative from a business and/or office occupation. Have them bring equipment to show operational aspects. (example: cashier, checker, clerk, etc.)
3. Have the student analize the various occupational jobs a housewife performs. Then investigate the wages received by a professional for each job. Have the student compute the weekly, monthly, or annual salary that the housewife would receive had she performed each job separately.
4. From the federal pay scale calculate the weekly, monthly, or yearly salaries for three grades.
5. Have students do work problems concerning the cost of tools or equipment needed in various careers. Use mail order catalog as source of information.
6. Plan trips and compute mileage costs as well as motel accomodations.

ACTIVITY: NUMBERS AND NUMERATION SYSTEMS

AIM: To show the student how the numeration system is used in everyday life

Description:

1. To show place-value have the student construct an odometer. Take a cylinder (juice can) and around it staple 6-9 strips of paper with the digits 0-9 on them. Have one strip red to indicate tenths of a mile. Turn the strips to indicate the number of miles. Students can compute miles traveled.

ACTIVITY: GRAPHING

AIM: To show the student many occupations make use of graphs

Description:

1. Research various occupations to find three which utilize graphs.
2. Invite a speaker from a department store or exchange to explain how they use graphs to keep records of sales.
3. Make a collection of graphs found in newspapers, magazines, etc. Explain how these relate to the occupation discussed in the article.
4. Ask a person from Man Power to speak on the use of graphs in determining the number of personnel necessary in each department.
5. Discuss the graphs on jobs perspectives in the front of the Occupational Outlook Handbook.
6. Construct a chart which graphically illustrates the changing job opportunities. For example, from 1940-the present. Also one that charts job projections and the future one that will show relationships between specific economic trends (Unemployment interest rates, etc.)
7. Have a weather man demonstrate how he uses graphs and grids to chart the weather.

ACTIVITY: GEOMETRY

AIM: To show that a knowledge of geometric concepts is necessary in many occupations.

Description:

1. Each student makes a chart of geometric shapes and lists the object he sees in everyday life that have this shape.
2. Have each student measure and calculate the wall space in a given room. Then have him find the amount of paint needed and compute the paint cost.
3. Survey an athletic field.
4. Use resource people such as; surveyors, engineer, draftsman, or carpenter to relate how their jobs use geometry.

5. Have the student do a construction project using only triangles. An example would be a bridge.
6. Have students design and construct boxed used to contain a new product they have devised. Further expansion of this project could be that each student would figure the market price on his product based on the costs needed to produce.

ACTIVITY: MEASUREMENT

AIM: To show that measurement is used in many occupations as well as everyday life.

Description:

1. Discuss the uses of the metric system in sports.
2. Use resource persons such as automechanic, medical personnel, and seamstresses to explain how they use the metric system.
3. Have the students weigh and measure themselves using both the metric and English systems of measurements compare the results.
4. Assign committees to collect various instruments used for measuring linear and cubic objects in both metric and English systems. Have the committee give a comparative demonstration of these instruments.
5. Have a speaker from aircraft maintenance discuss the importance of precision and relative error in his occupation.
6. Measure windows for shades and/or draperies. Compute amount of material needed.
7. Measure buildings, grounds, and play areas.
8. Using road maps obtained from major oil companies, compute mileage from one place to another.
9. Draw to scale the home the student would like to live in.
10. Bring in an experienced pattern drafting person. Have them explain how their job uses measurement. Then have the student design and draft their own pattern.
11. Have the student find a picture ad. Then figure out the scale drawing to the actual size of the product.
12. Have the student compute the per square foot cost of building homes.
13. Have a photographer explain developing and enlarging prints in relation to scales.

14. In teaching time, rate, and distance give the students airline schedules, rate books, and tickets. Have the student discuss how distance affects the ticket cost and how speed affects travel time. Explain how time and rate factors are arrived at from the airline rate and schedule book. Or have an airline representative explain. Have the students compute time, rate, distance problems. Allow the students to devise their own scheduling including time rate, and distance.
15. Study the weights and measurements on luggage and equipment of airline allowances. Discuss the reasons or bring in an airline representative to explain.

ACTIVITY: DECIMALS

AIM: To show the student how decimals are used in many occupations

Description:
1. Take the students to the library and have the Dewey Decimal System explained.
2. Make a check register for each student. Have them keep track of checks they could write. Make a bank statement from the student checks. Have the student balance their check books.
3. Make a collection of newspaper and magazine articles which contain decimals. Discuss how they relate to occupation in the article.
4. Have a carpenter demonstrate the micrometer caliper or other tools that use decimals (a micrometer caliper measures accurately to a thousandth of an inch).

ACTIVITY: RATIO, PROPORTION, AND PERCENT

AIM: To show that the concept of ratio, proportion, and percent is used in many occupations

Description:
1. Consider whatever sport is in season and have the students compute averages, percent of passes completed, percent of shots completed, etc.

2. When a sale is in progress have the students bring to class the discount prices or percents. From this calculate the one not given.
3. Collect catalogs from various mail order companies. Compare their percent interest in time payments.
4. Compare the differences between various banks or credit unions interest rates on loans and/or saving accounts. Have the students discover which particular bank or credit union has interest rates most beneficial to him.
5. Given a list of foods and budget have the student select the best buys by comparison buying.
6. Bring in a chef to demonstrate or explain how he uses ratio and proportion in cutting down or adding to a reciept.
7. Bring in a finance person from a payroll division to explain gross and net pay, and to explain the percentages of social security, federal, and state deductions.
8. Compile list of places students have been. Compute distances, and make graphs to find percentages at beach versus mountains.
9. Find heights via ratio and proportion.
10. Using the U. S. Department of Labor's Employment Opportunities related to vocational programs, tables 3, Labor Demand Overall Projections, have each student calculate the percent of growth for at least five occupations on a one year and five year projection.
11. Have a navigotor or pilot demonstrate to the class how they use ratio in their flying experiences.

ACTIVITY: NEGATIVE RATIONAL NUMBERS

AIM: To show how negative numbers are used in occupations in everyday life

Description:

1. Make a collection of words which are used to denote negative numbers such as minus, below, under, etc. Have the student name occupations which these words would be used. Explain how these terms are used.
2. Using stock markets results discuss their meanings. Have each student choose one or more companies and keep a record for a period of time. Evaluate the stock after the time alloted.

ACTIVITY: PROBABILITY AND STATISTICS

AIM: To show that a knowledge of probability and statistics is necessary in many occupations

Description:

1. Ask a traffic policeman to discuss how he uses statistics and probability in determining the location of traffic signals and where to position policemen to direct traffic.
2. Using dice, cards, and coins perform some simple probability experiments. Have the students research the probability of winning or losing various gambling games.
3. Use resource people such as insurance salesman.
4. To develop the idea of finding how many ways a sequence of tasks can be performed provide each student with a city or state road map, obtained from a major oil company. Have them select perhaps four intersections or cities and find the number of routes from the first to the second, second to the third, and third to the fourth. Have them trace the routes and then use the counting principle to find the total numbers of routes from first to fourth.

ACTIVITY: ALGEBRA

AIM: To show the practical application of algebra in various occupations

Description:

1. Bring in an engineer to show how he transforms and evaluates formulas in algebra in his work.
2. After teaching the binary system, have the students build a simple computer.
3. Have a computer specialist explain the various work done on a computer. Have him give the students problems that they can solve on their computers.
4. Take a field trip to see a computer in operation.

THE DAY THERE WAS NO MATH

An added activity to stress math in everyday living situations would be to have a day in which there was no math. This would include any exchanging of money, telling time, listing page numbers, grading papers, etc. This could be done school-wide as well as in the individual classrooms.

Time could be ignored. Teachers could arrive late. Bells or dissmissal for classes done at any time, thus some classes would be longer than usual and others shorter.

If handing out materials, give some students more than others. In monetary exchange, give wrong change as well as give different value to the coins.

Assign lessons without giving page numbers. Give a test without a grade.

The follow-up would have each child analize the effects of the previous day. Go into a discussion on how math really does affect daily living.

MATH OCCUPATIONS

```
C U T E L L E R M P C T A N A L Y S T A L S F A
L K P L U M B E R A A E P Q W E R T Y U I O P R
E S L E Z X S V N B R A P L K B A N K E R T T C
R T C C M D U S S O P C R C E E C O O Z I I S H
K A R T R R R L E O E H A O R Q T P S D F G E I
B T V R C A V X Z K N E I N A P U I T T A T C T
P I R I L F E L M K T R S T E R A L I Q U M R E
H S O C O T Y P L E E S E R K O R O L O D F E C
Y T L I Y S O K A E R A R A M L Y T Y P I S T T
S I S A J M R O R P S S K C S J O S T R T A A O
I C T N C A S H I E R E L T A N O T R T O C R T
C I P P O N S U K R L O N O Q R G S G M R O Y P
I A C C O U N T A N T O T R G X L P Z T C T R O
S N Z F G X P O P T O M E T R I S T L L M O O O
T R A S T R O N O M E R R Q S D I E T I T I A N
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WORD LIST

- CLERK
- PHYSICIST
- STATISTICIAN
- ACCOUNTANT
- TELLER
- CARPENTER
- PILOT
- TEACHER
- ANALYST
- BOOKKEEPER
- PLUMBER
- ELECTRICIAN
- DRAFTSMAN
- AUDITOR
- SURVEYOR
- CASHIER
- APPRAISER
- CONTRACTOR
- OPTOMETRIST
- BANKER
- SECRETARY
- TYPIST
- ARCHITECT
- DIETITIAN
- ACTUARY
- ASTRONOMER

FIND THE OCCUPATION

Mr. Neal, Mr. McMillan, Mr. Jensen, and Mr. Burnett serve the town of Orange as building contractor, banker, doctor, and mechanic-though not necessarily respectively. The doctor earns exactly twice as much as the mechanic, the banker twice as much as the doctor, and the building contractor earns exactly twice as much as the banker.

Mr. Burnett earns more than Mr. Jensen, Mr. Neal does not earn more than Mr. McMillan; Mr. McMillan does not earn more than Mr. Burnett, and Mr. Jensen earns twice as much as Mr. McMillan. What is each man's occupation?

ANSWER:

Mechanic	Mr. Neal	Banker	Mr. Jensen
Doctor	Mr. McMillan	Building Contractor	Mr. Burnett

FIND THE ANSWER

42 ÷ 3	63 ÷ 9	40 ÷ 10	44 ÷ 4		63 ÷ 7	100 ÷ 10
	36 ÷ 9	130 ÷ 10	24 ÷ 2	22 ÷2	21 ÷ 3	45 ÷ 9
7 x 3		26 ÷ 2	48 ÷ 12	_-9=2	40 ÷ 8	
56 ÷ 7	24 ÷ 2	84 ÷ 4		_x11=33	36 ÷ 9	105 - 5
20 ÷ 4	35 ÷ 7	126 - 6	?		46 ÷ 2	144 ÷ 12
18 ÷ 6	32 ÷ 8	33 ÷ 3	45 ÷ 6	60÷5	52 ÷ 4	!

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
4	2	3	6	5	8	1	7	9	17	15	16	18	13	12	19	26	21	10	11	22	23

W	X	Y	Z
14	24	20	25

CAREERS RELATED TO A MULTI-CULTURAL SOCIETY

Courses in the cultural area can be used not only to explore occupations in this field but also to investigate social and economic job conditions, to observe trends and changes in the employment world, and to see the interrelationships among all workers. By teaching the culture of people who may use another language, attention can be focused on their means of earning a livelihood. In each community there are personnel available for contacts--some of them within the limits of the military installation and others in the national community itself. The assistant to the mayor--the Cultural and Educational Affairs Minister in the local government--is most willing to help develop field trips and other visitations. The Department of Tourism, under the auspicies of the host nation government, can be of great help in planning and executing suggestions. The ideal for this level of school is to find field trips about one half hour away from the physical plant. This will allow for travel time without disturbing too many other classes. Find people who are NOT the usual stereotype. Ask workers from the community outside the base to come and bring tools of their trade. Cover the whole occupational spectrum by asking pilots, goldsmiths, ministers, authors, disc jockeys, etc., to come to school and talk with the students. Other areas such as language arts, science and social studies can be involved by having the pupils make interview notes and thank you letters, etc.

Children may also be taken off base to visit unusual occupations, such as a vinegar factory or sugar refinery. There are, in addition, many valuable contacts within the nationals who are employed on the installation. The knowledge they possess in weather information, etc., may be superior to that which their supervisors may offer. At school, your best contacts are the culture teacher, the media center, the administration, and the district coordinator. They are eager to supply additional help and material at any time.

The following material may easily be utilized in many other areas, such as social studies and foreign languages. An excellent easy book to refer to for other ideas is the Yellow Pages of Learning Resources by Massachusettes Institute of Technology Press 1972.

CAREERS RELATED TO A MULTI-CULTURAL SOCIETY

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I B. A. or above	Social Worker Psychologist Counselor YMCA Secretary Clergyman Diplomat Curator Missionary	Government Official Industrial Executive Economist Market Analyst Buyers Arbitrator Tour Conductor Commercial Attache Branch Manager Airways Corp.	Archaeologist Paleontologist Anthropologist Translator of Technical Writings Physician Nurse Engineer Geologist Archeologist Architect Pharmacist	Life Scientist Political Scientist Anthropologist Economist Geographer Sociologist Statistician Urban Planner	Judges **Lawyers** Philologist Editor Sociologist Librarian College Language Teacher Writer Foreign Language Paper Foreign Correspondent High School Language Teacher	Museum Curator Historian (Dramatic Arts)
II High School Plus Technical	Employment Interviewer Language Librarian Steward or Stewardess Receptionist	Union Official Wholesaler Retailer Dealer Foreign Books Secretary Bilingual Travel Bureau Manager Foreign Service Worker Fashion Buyer	Wireless Operator Researcher	Dietician Inspector Agricultural Engineer	Broadcaster	Tour Conductor Travel Bureau Director Cartoonist Art Collector

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
III High School Graduate	Policemen Religious Workers Bus Drivers Interpreter Translator Customs Inspector Immigration Inspector Traveling Companion	Real Estate Agent Floor Walkers Interviewers (poll) Foreign Clerk Foreign Collector Clerk Exporter Importer		Policeman Inspector Manufacturing Stationary Engineer	Library Assistant	Museum Guide
IV Less Than High School Graduate	Train Porters Taxi Drivers Belhops Elevator Operators Hotel Workers	Peddlers Newspaper Boy Hotel Clerk Armed Forces Merchant Marine Information Aide Courier		Taxi Driver Stationary Engineer	Library Page Copy Boy	

ACTIVITY: PEOPLE AT WORK IN A MULTI-CULTURAL SOCIETY

AIMS: To identify a variety of ways people earn a living
To recognize individual differences
To list reasons for choosing the course

Description: Students view film and discuss "How many jobs do you see?" Display a bulletin board with a variety of pictures of people working. Have students identify apparent category. Have students tell of people they know who work at such jobs. Discuss titles, descriptions, etc.

Identify "How we differ".
Students left-handed-stand
Students who like to read-stand
Students who enjoy arithmetic-stand

Discuss why they enrolled and what they hope to gain. Teacher lists students' stated goals.

Materials: Film: "Where the Action Is", Area Vocational School, Trade Magazines, Newspapers, Sheet to identify personal characteristics, Blackboard, Overhead Projector.

ACTIVITY: SUGGESTED TEACHING ACTIVITIES

AIM: To instill an appreciation of the worth of others
To make available opportunities for future job selection
To be able to prepare academically for a chosen career
To compare occupations in different cultures
To follow the exchange of realtionships between cultures

Description:

1. Visit the Chamber of Commerce.
2. Visit Civic Club meetings.
3. Visit city hall and public offices.
4. Use public officials as resource persons.
5. Attend a City Council meeting.
6. Invite local Civic Club members to class to discuss their organizations.
7. Visit the Red Cross of the host nation.
8. Have the class organize and entertain parents and/or guests at a tea.
9. Process raw materials native to the area.
10. Visit a local restaurant. Have the club talk about the training needed for this occupation.
11. Establish a class restaurant of native and/or foreign foods.
12. The class may build a city and/or a farm.
13. Set up a factory or corporation.
14. Trace occupations and countries involved in delivering a message from Washington, D. C. to your location if no telephone, telegraph, or other wireless of communication were not available for a one day period.
15. Dramatize bi-lingual occupations.
16. In a court, name the occupations involved in a trial.
17. Start a banking system in the classroom using movies other than American.
18. Visit an orphanage.
19. Illustrate or find pictures of how different cultures meet the needs of food, clothing, shelter and safety. Oral presentation with graphics using an overhead projector can be made.

20. Have children model clothing from various cultures, representing occupations or special activities.
21. Develop a book about the fruits, vegetables, flowers, music, dance, songs, handicraft, and/or receipts of some other culture. These might even be told as a class project to raise money.
22. Take pictures and make slides or a film of another culture.
23. Map all major and secondary roads off base.
24. Invite another school to a field day and play games native to another culture.

MUSIC

The music teacher helps to develop in all pupils an appreciation for music that will promote better use and enjoyment of leisure. For those students with above average music ability and interest, there are opportunities for them to prepare for both part-time and full-time music careers. To supplement a regular vocation, a person with musical ability can receive remuneration as a vocalist, church choir director, organist, accompanist, community chorus leader, or member of a band or community orchestra. Students with sufficient talent should be encouraged to read about career possiblities in music teaching, conducting, composing, arranging, recording, and music critic work. Opportunities for vocalists and instrumentalists exist in radio, movies, and television, and on the concert stage. The school music program furnishes an excellent chance for students to try out their skills along these lines.

As students are motivated by the assistance of and interaction with other students, it is highly recommended that music teachers utilize the talents of high school students to tutor and assist in teaching in the middle schools. Appropriate career materials and films on music careers are available in each District and also in the Area Curriculum Center.

CAREERS RELATED TO MUSIC

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURE	ARTS & ENTERTAINMENT
I B. A. or above		Impressario Music Store Manager			College Music Teacher High School Music Teacher	Composer Chorus Master Conductor Choir Master Music Critic Concert Master Opera Singer Orchestra
II High School Plus Technical		Salesman Music and Musical Instruments			Music Teacher Private	Arranger Music Librarian Organist Pianist Violinist Accompanist
III High School Graduate		Sales Clerk Music Store	Musical Instrument Repairman Organ Tuner Piano Repairman Piano Stringer Piano Tuner Violin Maker Violin Repairman			Instrument Musician
IV Less Than High School Graduate						Stage Hands

The following suggested activities are designed to help students have a better understanding of career education concepts:

ACTIVITY

1. Have students tell as many jobs as they can think of that relate to music. List these on a large piece of tagboard and mount on wall. (Don't forget workers involved in making instruments.)

2. Have students find pictures in magazines or newspapers showing how people use music as a form of recreation or pastime.

3. When singing songs related to an occupation discuss what workers are depicted.

4. Have students make a bulletin board using the attached diagram as a guide. They could find pictures in magazines that depict the various occupations related to music.

5. Discuss with students how music training they are receiving could be valuable to them in later life.

6. Discuss music as a form of recreation or pastime.

MUSIC

Have student research the salaries of different music career areas and music hobbies (e.g., church organist, housewife piano teacher) and chart them.

Have students conduct a survey of occupations related to P.E., recreation and health and determine basic education requirements. These will be shared in class.

Have student attempt to play numerous musical instruments to experience the skills required for performing on each.

Have the student report on the necessary retraining of a traditional musician so he can perform electronic music.

Working in pairs, the students will critically analyze a tape made of their performance. Each student will note the satisfaction he has received from his performance and write his own self-analysis.

In the field of music, the student will state the types of music which he enjoyed at the sixth, seventh, and eighth level. He will note and analyze the significant changes which may have occurred.

Through film strips and class visits by musicians and music industry personnel, have the student list the benefits to society of the different nusical occupations.

Have student compare and contrast the monetary and aesthetic benefits of a variety of musical occupations (e.g., symphonic violinist, popular musicians, composer, and conductor.)

Have the students survey and chart the different economic needs and wants of various musical occupations and compare the economic reqards of these fields.

Have the students divide into groups to demonstrate how technology has changed jobs in the reproducing and the transmitting of music (records, tapes, printing music).

PHYSICAL EDUCATION

Aptitude and liking for physical education activities constitute the basic requirements for success in a variety of vocations, including professional athletics, dancing, skating, coaching, camp counseling and directing, social service organization leadership, recreation work, and teaching. Instruction in health, which is included in the physical education courses of study, serves to focus attention on the need for more persons to fill the demands of the expanding field of health and medical careers.

Health instruction can also be used to promote consideration of the health aspects of vocations, such as the suitability of various occupations for the physically and emotionally handicapped, the existence of occupational diseases, and the laws pertaining to workers and working conditions. A vocational rehabilitation counselor, or representative of other government agencies involved in operation and enforcement of laws governing health matters, could be invited to speak to the class on the work opportunities in this field.

CAREERS RELATED TO PHYSICAL EDUCATION AND HEALTH

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I B. A. or above	School Nurse Camp Director Community Recreation Leader Health Education Leader		Physical Therapist Research Physiological Sanitary Engineer Recreation Therapist Occupational Therapist	Park Supervisor Range Management Specialist	Teacher Phy. Ed. Sports Columnist Sports Editor Sports Announcer Sports Writer	College Athletic Coach High School Athletic Coach Sports Cartoonist

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I B. A. or above	Playground Director Athletic Trainer Occupational Therapist Psychologist Psychiatrist Dietician Hospital Administrator Industrial Hygienist Field Health Officers		Hospital Rehabilitation Medical Technologist Physician Biologist Veterinarian Pharmacist Nurse Dentist Chiropractor Toxicologist			
II High School Plus Technical	Playground Worker Mortician Dental Assistant Dental Lab Technician Inhalation Therapist	Sporting Goods Store Manager Salesman Pharmaceutical Salesman Medical Secretary Chemical Secretary Salesman Scientific Supplies & Equipment	Golf Club Maker Biological Research Aide Dental Technician Dental Hygienist Optometrist Medical Technician Practical Nurse Embalmer	Floriculturist Nurseryman Tree Surgeon Fish Culturist Soil Conservation		

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
III High School Graduate	Community Center Worker Athletic Manager Time Keeper Umpire Golf Course Ranger Lifeguard Masseur Referee Camp Counselor		Lab Technician	Green's Keeper		
IV Less Than High School Graduate	Caddie Recreation Facility Attendant Swimming Pool Attendant Tennis Court Attendant Golf Club Attendant		Veterinary Hospital Attendant Zoo Caretaker Nurse's Aide	Hunting & Fishing Guide		

PHYSICAL EDUCATION

AIM: The activities that have been provided can be used as "discussion openers" and short eye-opening exercises to supplement your units in Career Education as related to health and physical education. This list is by no means complete, but one that will get you started and assist you in integrating your subject areas with health and physical education and your student's Career Education.

It is hoped that you will be able to find the time to look over the other activities in other areas as many can be easily adopted to your specific discipline.

ACTIVITY: P. E. - PHYSICAL EDUCATION

Description:

1. Students will spend a few minutes before the physical education activities are entered into and discuss the characteristics an individual would need to possess to be a successful worker in a physical education related job or career (e.g., teacher, camp counselor, recreation director, or professional sportsman).
2. On the basis of his abilities and interests in physical activities, the student will compile a folder on related occupational areas.
3. Students will read stories about people in sports such as, The Jackie Robinson Story; Fear Strikes Out; The Babe Ruth Story; The Confessions of a Dirty Ball Player; Ball Four; and observe how players must cooperate with one another to be successful. After discussing the stories, the student will state his own personal "Code of Conduct."
4. Students will prepare a bulletin board showing P. E. related occupations that are typical of various geographical areas such as snow mobiles, surfing, skin-diving, mountain climbing, etc.
5. During a student demonstration of a selected piece of physical education equipment, the student will explain the resources and processes used in its production (e.g., changes in baseball, football, or hockey equipment).

SCIENCE

Science courses offer almost limitless possibilities to show the application of scientific principles and research to industry, government, and business operations. Many jobs which require extensive science training are obvious to everyone. Most notable are those of the physician, the pharmacist, engineer, chemist, and the science teacher. However, many local enterprises employ persons with scientific backgrounds in occupations not so well known or as easily observed, such as dry cleaner, milk tester, and the sanitary engineer in public water or sewage departments.

How may the science teacher show the occupational implications of his subject? One teacher reported that he asks his students at the beginning of the year to state their vocational aims. He then illustrates continuously throughout the year how each phase of the course work applies to these vocations. Another teacher worked with his class in preparing an assembly program that required considerable research on requirements and duties of persons entering the engineering fields, as well as the industries where they were needed. The program included a panel of former students who are pursuing training in engineering.

There are other methods that science teachers may use to impart vocational information. Boys and girls can investigate the work of persons possessing training in the scientific occupations of forester, entomologist, lighting engineer, laboratory technician, barber, and TV repairman to see how each of these workers employs various aspects of the course of study. A study of conservation might be amplified to include a discussion of state and federal staff functions in carrying out provisions of conservation laws. One biology teacher uses methods of ecological field study to show how these comprise an important part of the work of the forester and fish and wildlife manager. The topic of life cycles is most interestingly explained in terms of game birds and forest plants, and its use by ecologists and conservationists serves as a good means of motivating students.

The study of the anatomy and physiology of the human body, its function and malfunction, is easily related to the professions of medicine and other health careers. In the study of plant specimen identification, the importance of herbs, drugs, and related chemicals to medicine can extend students' knowledge of health fields. Teachers can alert students to current movies and TV programs which depict the life and work of famous scientists.

Specific suggestions for relating occupational information to the principal science areas follow:

A. Life Science and Biology. The hospital, game farm, fish hatchery, zoo, dairy plant, greenhouse, and reforestation projects are but a few places that employ workers who use biology daily and which serve as sources of first-hand vocational information for students who visit them.

   One teacher asks his students to list as many occupations as possible under the headings of medicine, conservation, agriculture, and others. He then furnishes a prepared listing of occupations, and class discussion centers around those which are new to the students.

B. Physical Science and Chemistry. Field trips can show the applied chemistry field and the relevance of chemistry to the jobs being observed. Worthwhile visits may be made to tile and ceramic plants, hospital laboratories, paper mills, dry cleaners, pharmaceutical supply houses, synthetic and plastic manufacturing firms, or other local industries. Scientists can be observed in food processing and preservation plants; e. g., bacteriologists, dietitians, chemists, and inspectors. Metallurgical principles are applied by welders, assayers, mining engineers, and metallurgists.

C. Physics. The unit of study on light and color is easily related to such occupations as that of photographer, lighting engineer, astronomer, and paint mixer, to name only a few. The study of sound can be shown to have value for the musician. Electricity has innumerable applications in the field of industry. Radio, television, electronic systems, and sensory devices and materials have created whole new industries. Atomic and nuclear physics have in turn resulted in production of both military and peacetime adaptations, thus evolving new fields of endeavor. In the unit on atom structure and atomic energy the teacher can discuss the work of Bohrs, Einstein, Oppenheimer, and Ferni. To increase vocational horizons, students can make a list of occupations that have resulted from inventions since 1940.

CAREERS RELATED TO SCIENCE

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I B. A. or above	Occupational Therapist Psychologist Psychiatrist Dietician	Sales Engineer Mfg. Electronic Equipment	Anthropologist Chemist Medical Technologist Astronautic Engineer Physicist Engineer Mathematician Physician Biologist Botanist Veterinarian Pharmacist Nurse Dentist Chiropractor	Agronomist Wildlife Specialist Range Management Specialist Horticulturist County Agent Landscape Architect	Curator Science Teacher Phy. Ed. Teacher	

LEVELS	SERIVCE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
II High School Plus Technical	Mortician	Pharmaceutical Salesman Medical Secretary Chemical Secretary Salesman Scientific Supplies & Equipment	Biological Research Aide Dental Technician Dental Hygienist Optometrist Medical Technician Weather Observer Practical Nurse Embalmer	Floriculturist Nurseryman Tree Surgeon Fish Culturist Soil Conservation		Botanical Artist
III High School Graduate	Masseur		Taxidermist Glass Blower Dry Cleaner Textile Technician Lab. Technician	Landscape Gardener Poultryman Truck Gardener Apiarist		
IV Less Than High School Graduate			Veterinary Hospital Attendant Zoo Caretaker Nurse's Aide	Lumber Inspector Nursery Employees		Animal Trainer Photographic Technician

ACTIVITY: EARTH-SPACE SCIENCE EXPLORATION

AIM: To enable students to explore earth-space and environmental occupations

Description: Localize area of study--compare soil from this area, different rocks, stones and plant life.

Study topography. Try making a mock display of the local base or school grounds.

Have students explore occupations related to above; such as, surveyor, quarry operator, landscaper, geologist, and the operative occupations.

ACTIVITY: ENVIRONMENTAL LIFE

AIM: Each student will list and explain how environment plays a part in five occupations

Description: Invite a guest speaker from the local base civil engineer's or public work's office to visit your class and discuss pollution.

Elect committees to research and give written reports on occupations which deal with environment and ecology.

Construct a bulletin board showing the effects of various environments from pre-historic times to present.

Take a field trip to a nursery. As a follow-up activity, plant flower seeds in pots to be kept in the classroom. Then transplant the flowers to a garden on the school grounds, hospital, or some other site.

ACTIVITY: LABORATORY TECHNIQUE

AIM: The students, after several activities, will be able to understand and tell how laboratory techniques are used in three occupations.

Description: Take the class on a field trip to the base hospital or clinic and have them observe the laboratories in action.

Invite a medical technologist or laboratory technician to speak to the students and give a demonstration.

ACTIVITY: FOOD SERVICE EXPLORATION

AIM: The student will be able to name three different occupations which need a knowledge of foods.

Description: Visit one of the base cafeterias or dining halls. Have students note the many people involved in serving a great quantity of meals.

Make an anagram using a term such as food service specialist.

Invite a home economist to discuss foods and balanced diets.

ACTIVITY: ECOLOGY - FOREST FIRES

AIM: To have students identify various occupations
in fire fighting

Description: Name the fire fighting terms you can find in these letters. They read forward, backward, up, down, or diagonally. Draw a line around each as you find it, then check the list below.

FIGHTING FOREST FIRES

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H P L A R N W O D K C O N K S N A K
L U V C A M P B O S S C O F I E L D
D M A R A M U A N C H O R P O I N T
A N K O E I T R A A N C H O R C A O
N C F W H C T R T O R C H U C B N H
G T O N T R E I N F E R N O F S S S
E G R F I O R E R I F D J I L I T S
R N E I M W S R P P N A R S A T U S
I I D R S N M S A M I E E W N N O O
N E D G E F I R I N G G I E K O K R
D R A D Z T A N T U S D N H I T O C
E R L O O R E R A H A W N T N P O P
X A I G O E I R B D M O A A G M L A
B H T S S S D M I F U O J M Q E J U
R Y T A F T V S X F A F S Y P K M L
E H E L I S P O T S K A F C X E S J
A T R Z M A R Y Y K M C S A V E R N
K A Y R T L E I F O C C A T L I N E
O K F C M K P M A C E S A B S A M S
V S H N O I T A T S G A F O E K I L
M E S C O R C H L I N E Y S L A S H
R E V O K A E R B F O R E S T R Y I
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backfire
anchor point
base camp
breakover
camp boss
barrier
forestry

cat boss
cat line
cross shot
crown fire
dispatcher
helispot
duff

edge firing
fireguard
flanking
foam
danger index
knockdown
slash

swamper
scorchline
inferno
fog station

ACTIVITY: MICRO-ORGANISM

AIM: To make students aware of scientists who have contributed to the cure of disease

Description: After students learn the different parts of the microscope, discuss careers in which the microscope is used. Permit students to do independent research on lives of selected scientists, tracing the career development of these people.

Invite a nurse to speak with your students about immunizations and medical records, and the importance of these records when applying for a job, entering a trade or technical school or college.

ACTIVITY: GENERAL INVENTORY SCIENCE

AIM: To point out to teacher and student where science interests and strengths might lie

Description: Present the following questions for discussion:

1. Why is grass green?
2. Are you an animal?
3. If you were in a room with CO2 and NaCL, what would you be able to do with each of them?
4. Are there any acids that won't hurt you?
5. What purpose does the blood serve?
6. What is the boiling point of water? The freezing point?
7. If a glass is completely filled with ice and water, will it overflow when the ice melts?
8. Why does the moon shine?
9. When a seed germinates, how does it know what direction is up?

ACTIVITY: MAGAZINE OR CURRENT EVENTS ASSIGNMENT

AIM: To widen students' knowledge of a variety of science related occupations

Description: Students bring in magazine advertisements or science news articles. What jobs or occupations are indicated? What are the related occupations that might play a part in this ad or news story? In the science areas listed below, what occupations might have been involved in some way with the advertisement or article:

- Earth Science
- Chemistry
- Physical Science
- Medical and Health Fields
- Biology

For the jobs listed in each above area you might take students further and identify which require college training, which require 1-3 years training and which require high school graduation.

ACTIVITY: THE CHANGING EARTH

AIM: To make students aware of changes in the earth's surface through the passage of time

Description: Have the students observe erosion due to alternate heat and cold as well as chemical action. This is a good time to bring in resource speakers on base. (Geologists and chemists.)

Have students construct a fossil and discuss the role of the paleontologist. Have students bring fossils to class.

Have the students work in groups or independently making a mural showing the Archeozoic, Paleozoic, Mesozoic, and Cenazoic eras. (Archeology, art and anthropology can be discussed.)

ACTIVITY: TOPOGRAPHIC MAPS

AIM: To make students aware and understand topographic maps and how they are used

Description: Display topographic maps of areas that the students are familiar with, and study the markings. The local Civil Engineers or SRF generally have these on hand. Permit students to make their own maps of the school grounds, a farm, or any area of their choice.

Talk about people who would use topographic maps; soil conservation peronnel, surveyors, civil engineers, military personnel, aviators, etc.

SOCIAL STUDIES

Courses in the social studies area can be used not only to explore occupations in this field but also to investigate social and economic job conditions, to observe trends and and changes in the employment world, and to see the interrelationships among all workers.

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I B. A. or above	Social Worker Psychologist FBI Agent Counselor YMCA Secretary Clergyman	Government Official Industrial Executives Economist Market Analyst Buyers Arbitrator	Archaeologist Paleontologist Anthropologist		Judges Lawyers Philologist Editor Sociologist News Commentator Reporter Librarian	Museum Curators Historian (Dramatic Arts)
II High School Plus Technical	Police Sergeant Detective Sheriff Employment Interviewer	Union Official Bank Teller Salesman Wholesaler Retailer			Justice of the Peace Law Clerks Radio Announcers	Tour Conductor Travel Bureau Director Cartoonist
III High School Graduate	Policemen Religious Workers Bus Drivers	Floor Walkers Interviewers (poll) House Canvassers & Agents			Library Assistant	Museum Guide

LEVELS	SERVICE	BUSINESS CLERICAL & SALES	SCIENCE & TECHNOLOGY	OUTDOOR	GENERAL CULTURAL	ARTS & ENTERTAINMENT
IV Less Than High School Graduate	Train Porters Taxi Drivers Bellhops Elevator Operator Usher	Peddlers Newspaper Boy			Library Page Copy Boy	

ACTIVITY: DRAMA

AIM: To analyze various jobs in broad occupational areas to see how technology has changed them

Description: The students will dramatize the day in the life of a worker one hundred years ago, now, and the year 2000 to show how technology has affected the worker in terms of mental and physical demands.

Examples: Farmer
House Builder
Entertainer
Doctor
Teacher

ACTIVITY: BUZZ GROUPS ON SELF-ANALYSIS

AIM: To analyze how a positive self concept is reinforced through satisfaction with his works and/or from the value others place upon his work

Description: Students will form buzz groups to discuss the following statements:

a. Do you feel grades reflect what you are?
b. Do you think there is a relationship between your interests and your performance in certain subjects?
c. Do you feel it is important to receive recognition for what you have done well?
d. How do you feel about yourself when you have achieved goals you have set or goals others have set for you?

ACTIVITY: COMMITTEE WORK ON EVALUATION OF PRESENT SCHOOL CURRICULUM AS RELATED TO YOUR CAREER CHOICE

AIM: To identify and select the school subjects which contain the specific knowledge required for his career.

Description: Students will form a committee to evaluate present school curriculum and suggest courses directed toward meeting the requirements of his tentative career choice.

ACTIVITY: THE EXPLORATION OF MANY CAREERS

AIM: To explore a wide range of careers as they reflect individual interest and ability

Description: From major occupational areas each student will select six areas reflecting his interest and abilities in order to devote an extended period of time to studying each area. Exploratory experiences will include on-site observation, where possible classroom visits by resource people, and exposure to a variety of audio-visual materials. At the end of the designated period, students will set up booths displaying their different areas.

ACTIVITY: MAKING CHARTS ON HOW GEOGRAPHICAL SETTING AFFECT WORK

AIM: To investigate the geographical factors that affect various occupational areas

Description: After selecting three occupational areas of their choice, students will prepare a chart that will give the primary location of the occupation, reason for establishment in this geographic area, and ways in which the occupation is affected by its location.

ACTIVITY: WORK VALUE INVENTORY

AIM: To determine attitudes of students toward work concepts

Description: Each student takes the inventory questionnaire. With the help of the teacher determine the score of each of 15 scales.

WORK VALUE INVENTORY

HOW IMPORTANT IS THIS TO YOU

Work in which you . . .	VERY IMPORTANT	IMPORTANT	MODERATELY IMPORTANT	OF LITTLE IMPORTANCE	UNIMPORTANT
1. Have to keep solving new problems.	5	4	3	2	1
2. Help others.	5	4	3	2	1
3. Look forward to changes in your job.	5	4	3	2	1
4. Can get a raise.	5	4	3	2	1
5. Have freedom in your own area.	5	4	3	2	1
6. Gain prestige in your field.	5	4	3	2	1
7. Need to have artistic ability.	5	4	3	2	1
8. Are one of the gang.	5	4	3	2	1
9. Know your job will last.	5	4	3	2	1
10. Can be the kind of person you would like to be.	5	4	3	2	1
11. Have a boss who gives you a square deal.	5	4	3	2	1
12. Like the setting in which your job is done.	5	4	3	2	1
13. Get the feeling of having done a good day's work.	5	4	3	2	1
14. Have authority over others.	5	4	3	2	1

15. Try out new ideas and suggestions.	5	4	3	2	1
16. Create something new.	5	4	3	2	1
17. Know by the results when you've done a good job.	5	4	3	2	1
18. Have a boss who is reasonable	5	4	3	2	1
19. Are sure of always having a job.	5	4	3	2	1
20. Add beauty to the world.	5	4	3	2	1
21. Make your own decisions.	5	4	3	2	1
22. Have pay increases that keep up with the cost of living.	5	4	3	2	1
23. Are mentally challenged.	5	4	3	2	1
24. Use leadership abilities.	5	4	3	2	1
25. Have adequate lounge, toilet, and other facilities.	5	4	3	2	1
26. Have a way of life while not on the job that you like.	5	4	3	2	1
27. Form friendships with your fellow employees.	5	4	3	2	1
28. Know that others consider your work important.	5	4	3	2	1
29. Do not do the same thing all the time.	5	4	3	2	1
30. Feel you have helped another person.	5	4	3	2	1
31. Add to the well-being of other people.	5	4	3	2	1
32. Do many different things.	5	4	3	2	1
33. Are looked up to by others.	5	4	3	2	1
34. Have good contacts with fellow workers.	5	4	3	2	1

35. Lead the kind of life you most enjoy 5 4 3 2 1

36. Have a good place in which to work (good lighting, quiet, clean, enough space, etc.) 5 4 3 2 1

37. Plan and organize the work of others. 5 4 3 2 1

38. Need to be mentally alert. 5 [illegible] 3 2 1

39. Are paid enough to live right. 5 4 3 2 1

40. Are your own boss. 5 4 3 2 1

41. Make attractive products. 5 4 3 2 1

42. Are sure of another job in the company if your present job ends. 5 4 3 2 1

43. Have a supervisor who is considerate. 5 4 3 2 1

44. See the results of your efforts. 5 4 3 2 1

45. Contribute new ideas. 5 4 3 2 1

Adapted from Super's Work Values Inventory

SCORING KEY

CR	(Creativity)	15, 16, 45
MA	(Management)	14, 24, 37
AC	(Achievement)	13, 17, 44
SU	(Surroundings)	12, 25, 36
SR	(Supervisory Relations)	11, 18, 43
WL	(Way of Life)	10, 26, 35
SE	(Security)	9, 19, 42
AS	(Associates)	8, 27, 34
ES	(Esthetics)	7, 20, 41
PR	(Prestige)	6, 28, 33
IN	(Independence)	5, 21, 40.
VA	(Variety)	4, 29, 32

ER	(Economic Return)	3, 22, 39
AL	(Altruism)	2, 30, 31
IS	(Intellectual Stimulation)	1, 23, 38

Each item has a possible value of 5, 4, 3, 2, or 1 and the total of the values assigned to the three items for each of the fifteen scales yields the raw score for each scale. Therefore, each scale may have a raw score as high as 15 or as low as 3. A high raw score shows high value in that particular area.

If an item is skipped, assign a weight of "3" for that item.

ACTIVITY: GAMES

AIM: To better integrate the teaching of Social Studies to Career Education, the following games can be used

Occupational Guessing Game "What's My Line?" (quickie type)

Examples

I use a closed white truck in my work.
I visit each home about twice a week.
I must be strong to do my work.
I help keep you healthy.
Who am I? (Garbage Collector)

I am on call every day.
I sometimes wear a uniform.
I must have had education beyond high school.
I help keep you healthy.
Who am I? (Nurse - Doctor)

A more detailed version of "What's My Line?"
(A classroom learning activity that is played like the television game, "What's My Line?"

Each student researches a job in which he is interested. He should be prepared to answer questions about his occupation. A panel of four, a timekeeper, and a moderator are selected. The teacher may prefer to serve as moderator, because occasionally he will have to intervene and qualify answers.

Students volunteer to be questioned about their occupations. Each panel member questions for one minute, after which the timekeeper blows the shistle and the next panel member takes up the questioning where the last left off. In the event the panel does not guess the occupation in seven minutes, the student being questioned tells what he does. After the first panel has questioned the four volunteers, the four having been questioned serve as a panel member and as the guest with the job.

The game gets off to a good start when the panel is given some leading questions. The panel may start the questioning by finding out whether the job is of a manual, mechanical, etc., nature.

ACTIVITY: GAME - WHO AM I?

Description: Divide your class into two teams as in a "spelling bee" or a "ballgame". Below is a beginning list of questions to ask:

1. Saves swimmer from drowning and gives first aid. (Lifeguard)
2. Repairs oil field equipment and unscrews pump rods. (Roustabout)
3. Uses a hammer and a machine to fasten pieces of metal together. (Riveter)
4. Works in the forest and cuts down trees. (Lumberjack)
5. Draws cartoons to show important sports news. (Sports Cartoonist)
6. Serves meals and sandwiches to passengers riding on an airplane. (Stewardess)
7. Tells about different programs, interviews guests, and tells people about news. (TV Announcer)
8. Sells cars to people. (Auto Salesman)
9. Fixes cars so people can drive them. (Auto Mechanic)
10. Shows students how to use numbers. (Math Teacher)
11. Aids the pilot in all flying activity, keeps flight records, instrument reading, and relieves pilot. (Co-pilot)
12. Massages parts of players' bodies to relieve soreness, strain, and bruises. (Atheletic Trainer)
13. Plans recreational activities for recreational program, hires, and supervises camp staff. (Camp Director)
14. Plans and prepares news for TV announcers. (TV News Director)
15. Selects, propogates, and distributes plants and is involved in plant research. (Horticulturist Assistant)
16. Works with engineer and does field work such as surveying. (Civil Technician)
17. Plans meals for people on special diets. (Dietician)
18. Takes care of young children while their mothers work. (Child Day Care Worker)
19. Installs, repairs, and maybe sells major appliances and/or electric motors. (Electro-Mechanic)
20. Takes people to visit points of interest and tells them of facts and historical background. (Tour Guide)
21. Sells things. (Salesman)
22. Puts things in boxes. (Packer)
23. Shows other people how some things works. (Demonstrator)
24. Buys things. (Buyer)
25. Teaches others. (Instructor)

26. Advises or helps other people. (Counselor)
27. Manages, directs, or governs affairs. (Administrator)
28. Is in charge of people. (Supervisor)
29. Runs a machine. (Machinist)
30. Uses technical skill. (Technician)
31. Takes pictures. (Photographer)
32. Operates printing press. (Printer)
33. Paints a picture. (Artist)
34. Makes a cake. (Baker)
35. Makes a suit of clothes. (Tailor)
36. Operates a machine. (Operator)
37. Cuts steaks. (Butcher)
38. Repairs lamps. (Electrician)
39. Gives permanents. (Beautician)
40. Writes business letters. (Secretary)
41. Uses a saw. (Carpenter)
42. Trims beards. (Barber)
43. Arranges flower bouquets. (Florist)
44. Answers the telephone. (Receptionist)
45. Designs a building. (Architect)

Additional careers are listed in the "Hodge-Podge" Section.

ACTIVITY: PERSONALITY TRAITS

AIM: For the teacher and student to discuss characteristics or traits required for various jobs

Description:

1. Number each word in the personality trait list.
2. Ask each student to pick his own characteristics from this list. (Example: 2, 3, 5, 17, 19, 20)
3. Teacher compiles a class list of numbered "secret people" (no names). Each student is given a number.
4. Pass out each student's list and see if the other students can fill in each other's names by the numbers of the personality traits describing them.

In this same way you can show how personality traits are necessary for certain kinds of jobs. The teacher picks out five diverse occupations and identifies the "secret code" from the list. Example:

1. Politician	1. 1, 17, 20, 25
2. Barber	2. 3, 7, 15, 27, 32
3. Mechanic	3. ______________
4. Shoemaker	4. ______________

(Note: The above numbers do not correspond with the traits.)

In this same way the student is given a list of occupations and he is to make up the "secret code" to identify them. Use at least five personality traits. The other students can guess the name of the job.

PERSONALITY TRAITS

ABRUPT	Blunt, Plain-spoken
ABSENT-MINDED	Habitually forgetful
AFFECTIONATE	Tender and Loving
AGGRESSIVE	1. Boldly Hostile; Quarrelsome. 2. Bold and Active; Enterprising
AGGREEABLE	Pleasing; Pleasant
ALOOF	Cool; Reserved
AMBITIOUS	Strongly Desirous; Eager Desire
AMIABLE:	Good-Natured; Friendly
AGRGUMENTATIVE	Apt to Argue
ARROGANT	Full of Pride; Haughty
BASHFUL	Showing Social Timidity; Shy
BOLD	Daring; Fearless
BOSSY	Inclined to Play Boss (Boss: Master or Superior)
BRIGHT	Lively, Cheerful
CARELESS	1. Not Showing Due Care. 2. Without Care, as: Indifferent
COMPLAINER	One who is Dissatisfied
CONCEITED	Vain
CONFIDENT	Sure of Oneself
CONSIDERATE	Given to Care; Observant to Rights and Feelings of Others; Showing Thoughtful Kindness
COURTEOUS	Polite; Gracious
CREATIVE	Inventive
DEPENDABLE	Trustworthy, Reliable
DETERMINED	Having One's Mind Made Up
DISHONEST	Not to be Trusted
EAGER	Impatient or Anxious
EASY-GOING	Having a Comfortable Gait; Taking Life Easily
EMOTIONAL	Easily Aroused to Emotion
ENERGETIC	1. Having Energy (Energy: Force, Strength). 2. Active
ENTHUSIASTIC	Eager; Interested
FORWARD	Bold; Presumptuous
FRIENDLY	Kindly Disposed; Not Hostile
GAY	Joyous; Lively
GENEROUS	Willing to Give or Share; Unselfish
GENTLE	1. Refined; Polite. 2. Generous; Kind
GREEDY	Wanting Excessively to Have or Acquire
HONEST	1. Trustworthy; Truthful. 2. Showing Fairness and Sincerity

INDUSTRIOUS	Characterized by Earnest, Steady Effort; Hard-Working
INQUISITIVE	Inclined to Ask Questions; Curious
JEALOUS	Suspiciously watchful; Intolerant of Rivalry
KIND	Sympathetic, Gentle, Benevolent
LAZY	Not Eager or Willing to Work
LOYAL	Faithful to the Lawful Government; True to Any Person
NEGATIVE	Expressing Denial or Refusal
OBSTINATE	Unreasonably Determined to Have One's Way
OPPORTUNIST	One who Thinks or Does Something Without Regard for Principles
ORDERLY	Well-Behaved
OVERSENSITIVE	Very Sensitive
PATIENT	Bearing or Enduring Pains, Trials, or the Like Without Complaint; Able to Bear Strain, Stress, Etc.
PERSERVING	Doing Things in Spite of Difficulty
PERSISTENT	Continuing, Especially in the Face of Opposition
POISED	The Bearing of the Body or Head; Carriage
POSITIVE	Having the Mind Set; Confident
RELIABLE	Dependable
RUTHLESS	Without Pity or Compassion
SARCASTIC	Uses Stinging or Cutting Remarks
SELF-CENTERED	Concerned Only with One's Affairs; Shelfish
SENSITIVE	Easily Offended; Touchy
SHORT-TEMPERED	Having a Quick Temper
SHY	Easily Frightened; Timid
SILLY	Happy, Good; Lacking in Sense; Foolish
SINCERE	Without Deceit or Pretense
SOCIABLE	Friendly
STABLE	Firm in Character, Purpose, Etc.
SULLEN	Showing Ill-Humor and Resentment by Withdrawal; Gloomy; Dismal
STUBBORN	Persistent; Obstinate
STUDIOUS	1. Given to or Pursuing Study. 2. Diligent in Attention; Carefully Ernest
TACTFUL	Knowing How to do or say the Right Thing Without Offending
THOUGHTFUL	Considerate
TOLERANT	Inclined to Tolerate Other's Beliefs

WORKERS IN YOUR LIFE

ACROSS

1. Fights fires
2. Plans layouts; installs and repairs wiring and electricl fixtures
3. Prepares and cooks meals for work crews or residents and employees of institution; cuts meat; serves meals; washes dishes
4. Treats diseases and disorders of the human body
5. Serves as a member of the Armed Forces, performing duties under military orders
6. Instructs pupils in one or more subjects, prepares assignments, administers tests, keeps records, and maintains discipline
7. Writes original literary works such as articles, plays, poems, fiction, etc.
8. Examines patients and performs operations
9. Has ability in a particular field such as painting, sculpture, literature, music, or dancing
10. Diagnoses and treats diseases and disorders of animals
11. Provides beauty services for customers
12. Flies airplane or helicopter
13. Instructs athletes in Developing individuals and/or teams for sports competition
14. Designs and makes tailored garments
15. Types letters, reports, stencils, forms, addresses; may operate duplication machines
16. Drills and blasts earth and rock excavations to construct underground shafts and tunnels for projects; mines ore, coal, or rock

17. Connects metal parts together using heat; repairs worn or damaged metal parts

18. Assists waiter, carries dishes, cleans equipment

19. Recovers sofa, chair, or other furniture pieces

DOWN
1. Administers banking services such as loans, trust funds, safety deposit services, investment counseling, checking and savings accounts

2. Applies coats of paint, varnish, stain, etc. to decorate and protect buildings

3. Conducts religious worship services

4. Diagnoses and treats diseases, injuries, and malformations of teeth and gums

5. Opens doors, partks cars, carries luggage and greets people

6. Constructs, installs, and repairs structures and fixtures of wood

7. Conducts criminal and civil lawsuits; draws up legal documents

8. Same as 2 Down

9. Audits or examines accounts

10. Collects and analyzes facts about newsworthy events and writes or transmits these news items to others

11. Portrays role in dramatic production

12. Plans menus and diets, purchases food, and directs workers in food service program for hospital, school, or restaurant

13. Plays a musical instrument or composes or arranges music

14. Receives funds from customers, counts money, records money transactions
15. Assembles, installs and repairs pipes
16. Performs chemical tests; analyzes or experiments in a laboratory
17. Makes and dispenses medications following prescriptions issued by a doctor

TOOLS OF THE TRADE

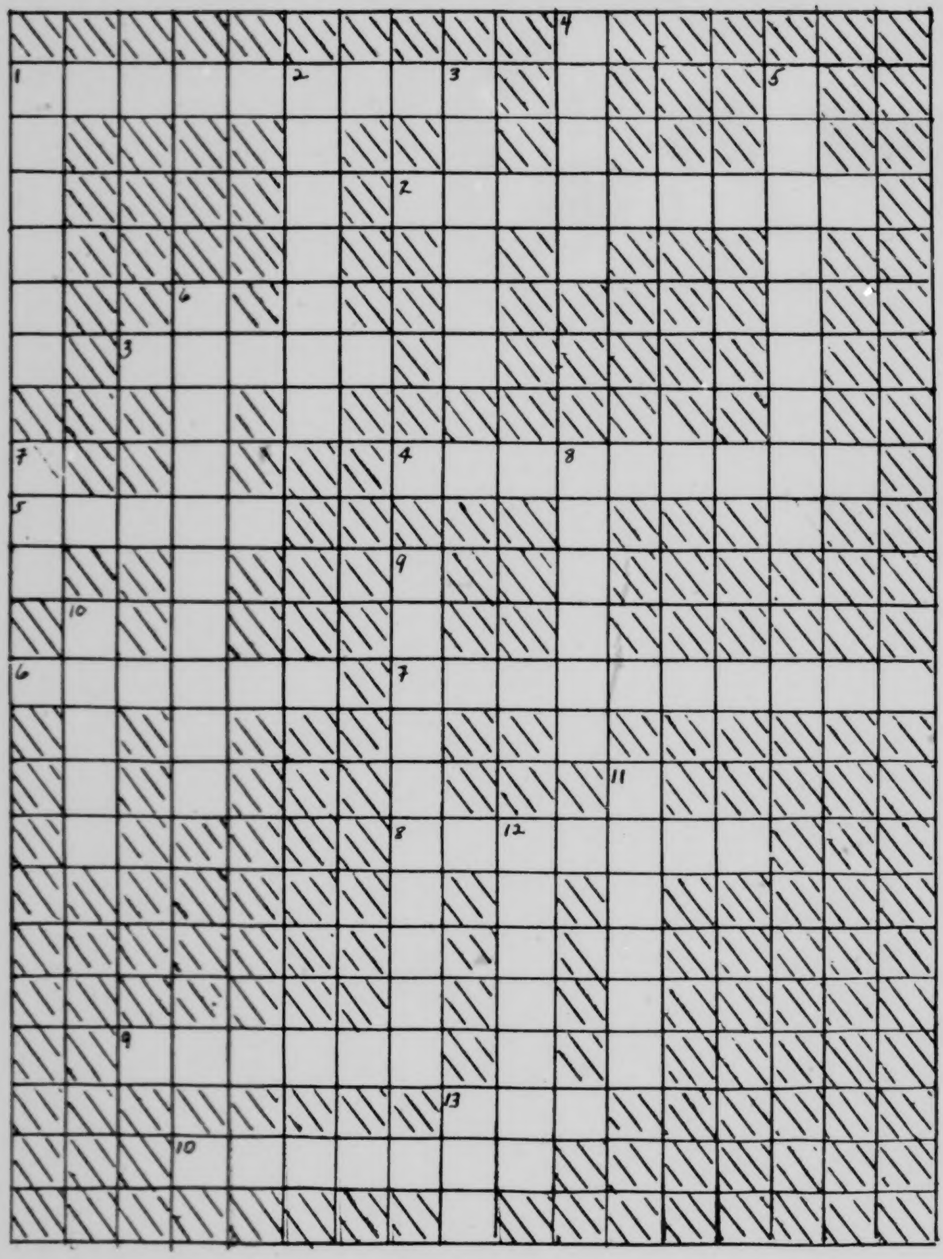
DOWN

1. Sheet Music, Voice Lessons
2. Chalk, Textbooks, Paddle
3. Money, Checks, adding Machine
4. Steno Pad, File Cabinet, Pencil, Ledger Book
5. Try Square, Pencil, Graphite, Lettering Guide
6. Telescope, Sextant
7. Trenchcoat, Electronic Listening Devices, Reconnaisance Plane
8. Typewriter, Eraser, Paper
9. Blueprints, Cost Estimate Charts, Materials Catalogues, Union Contracts
10. Bricks, Cement, Sand, Blocks, Stone
11. Torch, Rods, Welding Hood
12. Same as Two Down
13. Cages, Hypodermic Needle, Bandages, Medicine

ACROSS

1. Test Tubes, Thermometers, Sliderule, Chemicals
2. Bible, Prayer Book
3. Flashlight, Program Schedule, Uniform
4. Menus, Calorie Charts, Protein Charts, Etc.
5. Airplane Control Panels, Flight Schedule
6. Tractor, Hoe, Fertilizer
7. Seeds, Seedlings, Clippers, Hole Diggers
8. Stage Costumes, Makeup, False Eyelashes
9. Clippers, Comb, Scissors
10. Pipe Cutter, Threader, Pipe Wrench
13. Same as 13 Down

TOOLS OF THE TRADE



TOOLS OF THE TRADE

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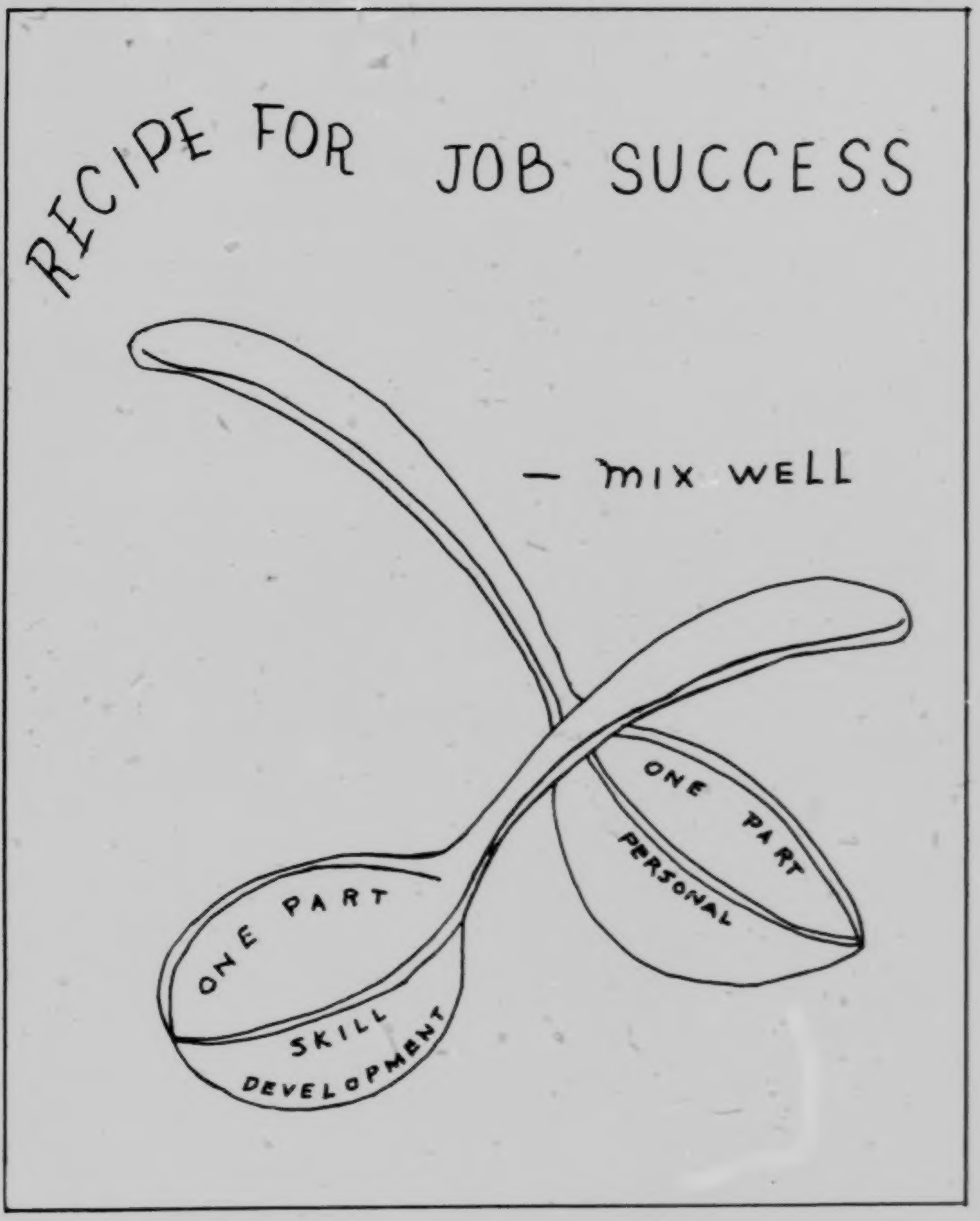
ACTIVITY: BULLETIN BOARD

AIM: To aid in the development of personality traits for Career Education

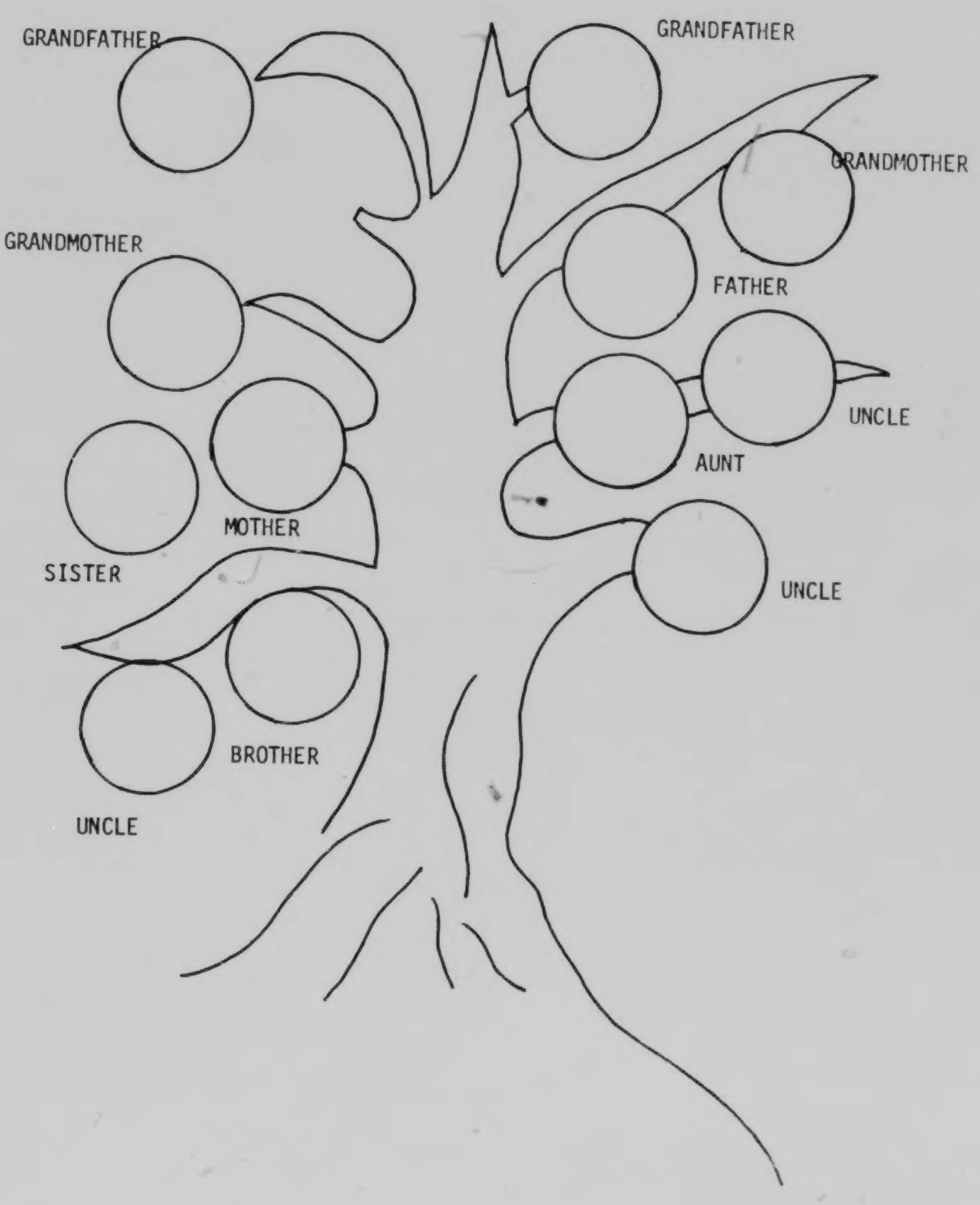
Description: The following is a suggestion for students to use as a bulletin display. Ask students for any other suggestions to incorporate the same idea.


RECIPE FOR JOB SUCCESS
— mix WELL
ONE PART SKILL DEVELOPMENT
ONE PART PERSONAL

JOB CLUSTER BINGO

Each player writes the name of one of the job clusters (refer to the "Cluster Wheel") in each square on the Bingo sheet. A cluster can be used more than once if desired. The caller shakes the cards which have occupations on them, draws one at a time, and calls it out to all players. If he calls the occupation belonging to the cluster on the player's Bingo sheet, the player covers the square. The first person to cover three classifications in a row wins. Variations such as four corners, blackout, etc., may also be used.

MY FAMILY JOB TREE


GRANDFATHER
GRANDFATHER
GRANDMOTHER
GRANDMOTHER
FATHER
UNCLE
AUNT
MOTHER
SISTER
UNCLE
BROTHER
UNCLE

ACTIVITY: OCCUPATIONAL RIDDLES

Description: Have the class divided in groups and make up occupational riddles as shown below. Use your imagination and "have fun" with the words.

What worker always walks behind a star? (policeman)

What is the President's second occupation? (cabinetmaker)

Who may marry many women yet stay single all his life? (clergyman)

What is always in front of you, yet can never be seen? (your future)

What worker earns a living but never does a day's work? (night watchman)

Divide class in groups and dramatize the relatedness of occupations in acquiring an item.

Example: Purchasing a jump rope

Little Girl: Storekeeper, I have $1.00 to buy a jump rope.
Storekeeper: I will tell my secretary to order one for you.
Secretary: I will order one from the salesman.
Salesman: I will tell the people at our factory to make one and send it on our delivery truck.
Factory Man: To make one for you, I will have to get wood from the lumberman for the handle and cotton from the mill man for the rope.
Lumberman: I will send a lumberjack to chop down a tree and bring us the wood.
Mill Man: I will have the farmer pick some cotton and we will make the rope.

NAME THE SCHOOL

Draw a line connecting the TV personality to the school he might have attended.

1. Marcus Welby
2. Ironsides
3. Josephine
4. Barney on "Mission Impossible"
5. Madge
6. Keith Partridge
7. Fifth Dimension
8. "That Girl"
9. Owen Marshal
10. Julia
11. McCloud
12. Pete Dixon
13. Mary Richards
14. Professor Howard
15. Doris Martin

A. Vocational-Technical
B. Nursing
C. Medical
D. Teachers' College
E. Cosmetology
F. Law
G. Plumbers
H. Journalism
I. Journalism
J. Fashion Institute
K. Music
L. Business

COMMUNICATIONS OCCUPATIONS

W R I T E R K L O Z A L C R I T I C M O I S O A

A P T A O E O C L E R T U L K Z Y O T L I I S N

C R O C Z P L O O X T F Y E J F T R L T L N J N

R U U T C O L U M N I S T C Z O C R A A L S A O

R Z J O U R N A L I S T P T O T A E R L U T T U

E Z X R M T N O P B T V W U Y T T S R O S R P N

S O O T L E D I T O R O T R O O U P S E T U E C

S I N T E R P R E T E R R E T R E O L E R C L E

A Q W E R T Y U I O P L K R T R A N S L A T O R

A U C T I O N E E R Z X C V B N M D O T T O T E

P S T O O Z A E R T P U B L I S H E R T O R Z K

T S O H L K R T N M B M H V R H T N R N R H M P

A S D F O H G J K L M N B V C X Z T E A C H E R

Q W E R T R N E W S B O Y Y U I O P M N M B X T

WORD LIST

WRITER
REPORTER
COLUMNIST
JOURNALIST
EDITOR
INTERPRETER
AUCTIONEER

PUBLISHER
CRITIC
CORRESPONDENT
TEACHER
TRANSLATOR
ANNOUNCER
ACTOR

LECTURER
ARTIST
ILLUSTRATOR
ACTRESS
INSTRUCTOR
AUTHOR
NEWSBOY

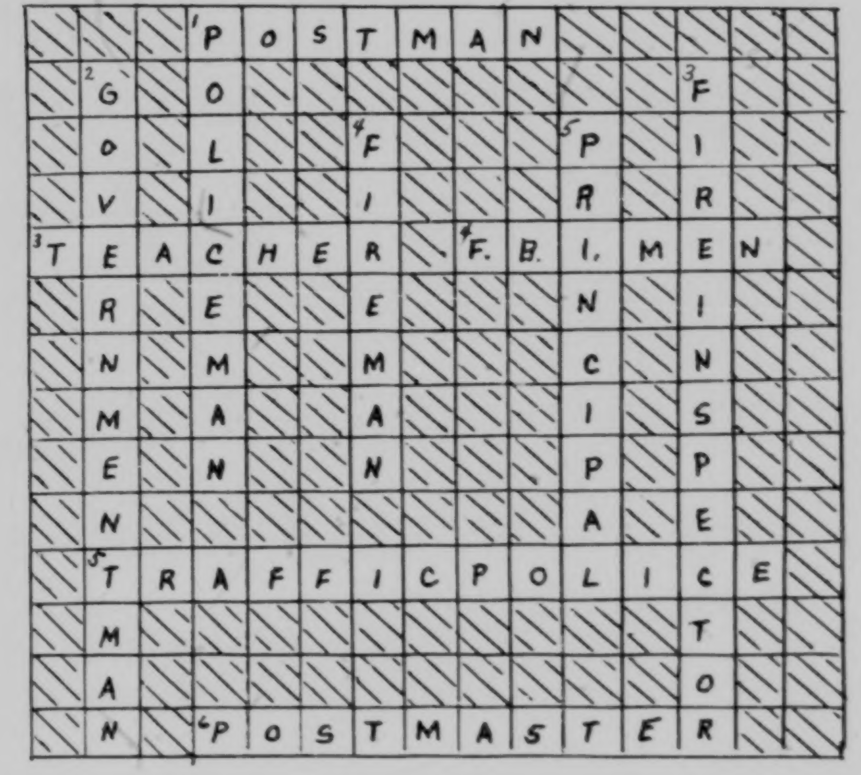
FIND THE WORDS LISTED ABOVE AMONG THE SCRAMBLED LETTERS AND CIRCLE. THE WORDS MAY BE SPELLED VERTICALLY, HORIZONTALLY OR DIAGONALLY.

OCCUPATIONS

AGENT
BAKER
BANKER
BINDER
BOXER
BROKER
CADDY
CARPENTER
CASHIER
CHECKER
CLERK
COACH
COOK
DENTIST
DIVER
DOCTOR
DOORMAN
DRIVER
DRUGGIST
EDITOR
FARMER
FIREMAN
FLIER
GROCER
JANITOR
JUDGE
LAWYER
MAID
MANAGER
MASON
MECHANIC
MINER
MINISTER
MODEL
MOVER
NURSE
OFFICER
PAGE
PAINTER
PLUMBER
POET
PORTER
PRESSER
PRINTER
RACER
REALTOR
REPORTER
SALESMAN
TAILOR
TEACHER
TUNER (Piano)
TYPIST
UMPIRE
WAITER
WELDER
WRITER

T E O P F A R M E R C H A N T C R I T B
R K F B A K E R A C E R L A W Y E R O O
E Y W K O O C R E T N I A P O R T E R X
H B A R R O I E N E R E L L E T N U M E
C B I O H X F F U A D U C C S D I V E R
T A T R P M F I R E M A N I G X R C E E
E C E E L U O E S B S R T U N L P Y U T
A F R B R E K C E H C N O M C A D D Y S
C L E R K N I R I L E W U O A H H R T I
H C I A A R W E L D E R D R D S E C T N
E E Y B S X R R I O S F M R E V O M E I
R M T S I P Y T I C B L A A I R E N I M
U W O R E K O R B T O I I R N M O D E L
T A I L O R H I O O E E D R U G G I S T
C A R P E N T E R R S R E C O R G E H R
O J U D P A G E N T N A V R E S S E R P
A M B I N D E R S A L E S M A N A G E R
C R E N U T R U S T E E R I P M U X G B
H R E J A N I T O R E P O R T E R S H T

FIND THE WORDS LISTED ABOVE AMONG THE SCRAMBLED LETTERS AND CIRCLE.
THE WORDS MAY BE SPELLED VERTICALLY, HORIZONTALLY OR DIAGONALLY.



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	V		I			I				R		R		
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	R		E			E				N		I		
	N		M			M				C		N		
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	E		N			N				P		P		
	N									A		E		
	5 T	R	A	F	F	I	C	P	O	L	I	C	E	
	M											T		
	A											O		
	N		6 P	O	S	T	M	A	S	T	E	R		

PUBLIC SERVICES

ACROSS

1. One who delivers mail.
3. One who conducts a class.
4. One who investigates (abr.)
5. One who conducts traffic.
6. A person in charge of a post office.

DOWN

1. A member of a police force.
2. Persons who works for the government.
3. One who checks the fire department.
4. One who puts out fires.
5. Administrator of a school.

1 B	E	L	L	B	O	Y	▨	▨	▨	▨	▨	▨	▨	2 P
E	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	3 H	▨	▨	R
A	▨	4 B	A	R	B	E	R	▨	▨	▨	A	▨	▨	E
U	▨	▨	▨	▨	▨	▨	▨	▨	5 M	A	I	D	▨	S
T	▨	▨	▨	▨	6 W	▨	7 W	▨	A	▨	R	▨	▨	S
Y	▨	▨	▨	▨	I	▨	I	▨	N	▨	D	▨	▨	E
S	▨	▨	▨	▨	N	▨	G	▨	I	▨	R	▨	▨	R
8 H	O	T	9 E	L	D	E	S	K	C	L	E	R	K	▨
O	▨	▨	X	▨	O	▨	T	▨	U	▨	S	▨	▨	▨
P	▨	▨	T	▨	W	▨	Y	▨	R	▨	S	▨	▨	▨
O	▨	▨	E	▨	W	▨	L	▨	I	▨	E	▨	▨	▨
P	▨	▨	R	▨	A	▨	I	▨	S	▨	R	▨	▨	▨
E	▨	▨	M	▨	S	▨	S	▨	T	▨	▨	▨	▨	10 M
R	▨	▨	I	▨	H	▨	T	▨	▨	▨	▨	▨	▨	A
A	▨	▨	N	▨	E	▨	▨	11 J	A	N	I	T	O	R
T	▨	▨	A	▨	R	▨	▨	▨	▨	▨	▨	▨	▨	K
O	▨	▨	T	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	E
R	▨	▨	O	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	R
▨	▨	▨	12 R	U	G	C	L	E	A	N	E	R	▨	▨

PERSONAL SERVICE

ACROSS

1. A boy or man to carry luggage in a hotel.
4. One who styles or cuts men's hair.
5. A woman who works to clean, cook, etc. for others.
8. The person at the desk in a place for traveling people. (3WD)
11. One who takes care of a building apartment house, etc.
12. One who uses rug shampoo.

DOWN

1. The manager of a place where ladies get their hair styled.
2. One who operates a steam press in a laundry.
3. A person who styles ladies' hair.
5. A person who takes care of the hand: Especially trimming, polishing, etc. of the fingernails.
6. One who cleans clear glass.
7. One who dresses the hair on a wig.
9. A person who kills pests in houses.
10. One who marks clothing in a laundry.

1 A	C	C	2 O	U	N	3 T	I	N	G	C	L	E	R	K
C	▨	▨	F	▨	▨	R	▨	▨	▨	▨	▨	▨	▨	▨
C	▨	▨	F	▨	▨	A	▨	▨	▨	▨	▨	▨	4 S	▨
O	▨	▨	I	▨	▨	N	▨	▨	5 P	▨	▨	▨	E	▨
U	▨	▨	C	▨	▨	6 S	E	C	R	E	7 T	A	R	Y
N	▨	▨	E	▨	▨	C	▨	▨	O	▨	Y	▨	V	▨
T	▨	▨	C	▨	▨	R	▨	▨	G	▨	P	▨	I	▨
A	▨	▨	L	▨	▨	I	▨	▨	R	▨	I	▨	C	▨
N	▨	▨	E	▨	▨	B	▨	▨	A	▨	S	▨	E	▨
T	▨	8 B	R	O	K	E	R	▨	M	▨	T	▨	M	▨
▨	▨	▨	K	▨	▨	R	▨	▨	M	▨	▨	▨	A	▨
▨	▨	▨	▨	▨	▨	▨	▨	▨	E	▨	▨	▨	N	▨
9 T	A	P	E	L	I	B	R	A	R	I	A	N	▨	▨

BUSINESS AND OFFICE

ACROSS

1. One who keeps books (2WD.)
6. One who helps, as an assistant, to a business man.
8. One who helps people with their investments.
9. One who keeps tapes in order in a library system.

DOWN

1. One who inspects books.
2. A person who files things.
3. One who makes typewritten copies.
4. One who adjusts, repairs, and cleans office machines.
5. One who writes coded instructions for computors.
7. One who does typing in an office building.

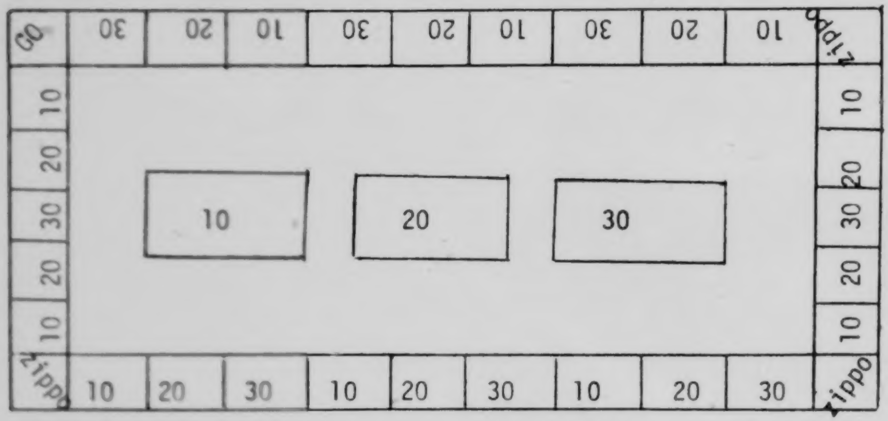
ZIPPO

Materials Needed:

- Cardboard (approximately 2' x 3')
- Dice (one)
- A Chip for Each Player
- Cards (60) (Approximately 3" x 5")

1. Make the cards with a number on one side and information desired written on the other.

2. Cover or color the board. Mark in the following manner.



Select one player to be the "Pot Holder" or dealer.

Directions: The player rolls the dice and counts off the number of spaces on the board that the dice reads. He moves his chip to this spot. The dealer draws a card corresponding to the number on the now occupied space and calls out the occupation on the back of the card. If the player correctly names the job cluster (Job Cluster listing in this handbook) to which this occupation belongs he may remain on this spot. If at anytime the player misses he must return to go. The drawn card is returned to the bottom of the stack. If the player lands on "ZIPPO" he gets another roll of the dice. The person who "ZIPS" around the board first is the winner.

Variations; Job titles and their responsibilities (does this person work with people, ideas or things; the main task performed; is the work inside or outside, etc.) Spelling of vocabulary words. Mathematics--multiplication tables, fractions, etc. Social Studies--Countries with important facts, community helpers and their jobs, states and capitals, etc.

Across

1. To pound a nail use a ____________________________.

2. To be a journeyman you must serve an ___________.

4. When attempting to find career information related to industrial arts talk to your ______________________.

5. A threaded devise used to connect two pieces of wood.

7. Used to cut lumber or metal.

8. A person who draws plans of buildings is a _________.

9. Check with your teacher before starting work on your ____________________.

11. A _________is used to put holes in wood or metal.

12. It is important to begin planning your______________.

13. Many technical skills which lead to rewarding careers are developed in the community______________________.

14. Many things you learn in industrial arts are valuable to the airline's__________________________.

Down

1. It is ideal to develop safe work____________________.

3. You should attempt to ________a career cluster now.

6. A___________may be used to hold wood together while gluing.

7. A screwdriver which fits a screw with a slot running all the way across the top is named a_______________ screwdriver.

10. To have a degree in_______________you will have to attend four years of college.

15. One who inspects is called an ________________________.

1 H	A	M	M	E	R		2 A	P	P	R	E	N	T	I	C	3 E	
A																L	
B																E	
4 I	N	S	T	R	U	C	T	O	R							C	
T																T	
5 S	6 C	R	E	W					7 S	A	W						
	L								T								
	A						8 D	R	A	F	T	S	M	A	N		
	M								N								
	9 P	R	O	J	10 E	C	T		11 D	R	15 I	L	L				
					N				A		N						
					G				R		S						
					I				D		P						
					N						E						
		12 C	A	R	E	E	R				13 C	O	L	L	E	G	E
					E						T						
					R						O						
				14 P	I	L	O	T			R						
					N												
					G												

HODGE-PODGE SECTION

The activities in this section have general application. With slight modification they are adaptable to a variety of curriculum specialists.

ACTIVITY: CAREER CORNER

AIM: To provide resources in your classroom related to Career Education

Description: Using one corner of the classroom, have students collect and organize material related to careers in your speciality. Books, magazines, newspaper clippings, job briefs, career information from the library, as well as posters from business, industry and other agencies can provide a meaningful display.

VOCABULARY WORDS

Accountant
Actor
Actress
Agricultural
Agrogiologist
Agronomist
Analyst
Anatomist
Amesthesiologist
Anesthetist
Announcer
Anthropologist
Anthropomedrist
Apiarist
Apiculturist
Appraiser
Apprentice
Aquarist
Arborer
Arboriculturist
Architect
Archivist
Artist
Assayer
Assembler
Assistant
Associate
Astrologer
Astronomer
Athlete
Attendant
Attenuator
Attorney
Auctioneer
Audiologist
Auditor
Augerman
Author

Bacteriologist
Baker
Baler
Bandmaster
Barber
Bartender
Bayero
Beautician
Beekeeper
Bellboy
Biochemist
Biographer
Biologist
Blacksmith
Blaster
Boatswain
Bookkeeper
Brakeman
Bricklayer
Buccaro
Buffer
Builder
Butcher

Caddie
Calker
Caller
Candlemaker
Cardiologist
Caretaker
Carpenter
Cartoonist
Carver
Caseworker
Cashier
Caster
Cataloger
Caterer

Cattleman
Chauffeur
Checker
Cheesemaker
Chemist
Chiropractor
Clerk
Clown
Coach
Cobbler
Coiler
Collector
Colorer
Columist
Conductor
Confectioner
Cook
Coopersmith
Coordinator
Copyist
Coroner
Correspondent
Cosmetologist
Counselor
Countersinker
Couturier
Cowpuncher
Craftsman
Craneman
Crankman
Crater
Cremator
Crimper
Crocheter
Crusher
Curator
Custodian
Cutterman

Cytologist
Cytotechnologist

Dairyman
Dancer
Darner
Deckhand
Decorator
Demonstrator
Dentist
Dermatologist
Derrickman
Designer
Detective
Developer
Dietitian
Director
Dispatcher
Diver
Dockmaster
Doctor
Dramatist
Draper
Dresser
Driller
Driver
Druggist
Draftsman
Dyer

Ecologist
Econometrist
Economist
Edger
Editor
Educator
Electrician
Electrotyper
Embalmer
Embosser
Embroiderer
Enameler
Engineer
Engraver
Engrosser
Equestrian
Escort
Estimator
Essayist
Etcher
Ethnologist
Etymologist
Eviscerator
Examiner
Exodontist
Exterminator
Extractor

Fabricator
Farmer
Filer
Finisher
Fireman
Fisherman
Fitter
Flanger
Foreman
Forester
Framer
Frogger
Froster
Fumigator
Furrier

Gaffman
Galvanizer
Gamekeeper
Gatekeeper
Geologist
Geographer
Geneticist
Geodesist
Ginner
Glazier
Glueman
Gluer
Goldsmith
Golfer
Governess
Governor
Grader
Groceryman
Guard
Guide
Gunsmith
Gynecologist

Handyman
Harpist
Hemstitcher
Historian
Horticulturist
Host
Hostess
Hostler
Hypnotist

Iceman
Illustrator
Imitator
Impersonator
Inkman
Inlayer
Inspector
Installer
Instructor
Interviewer
Investigator
Ironer
Ironworker

Jeweler
Janitor

Joiner
Judge
Juggler

Kennelman
Keysmith
Kilnman
Knitter
Knotter

Labeler
Laminator
Landscaper
Latherer
Laundress
Lawyer
Letterer
Librarian
Lifeguard
Lineman
Linguist
Lithographer
Lobbyist
Loftsman
Logger

Machinist
Manager
Maid
Mailman
Marker
Masseur
Mason
Mathematician
Mechanic
Mender
Metallurgist
Meteorologist
Meterman
Microbiologist
Miller
Miner
Mineralogist
Mixer
Model
Molder
Motorman
Musician
Mycologist

Naturalist
Navigator
Needlemaker
Newsboy
Neurogurgeon
Nurse
Nutritionist
Novelist
Nurseryman

Oarsman
Observer
Operator
Optician
Optometrist
Orchardist
Orchestrator
Orderly
Orthoptist
Osteopath
Orthodontist
Oxidizer

Packer
Paddler
Page
Painter
Paleontologist
Pantrygirl
Paperhanger
Parasitologist
Paster
Pasteurizer
Pastor
Pathologist
Patrolman
Patternmaker
Pawnbroker
Peeler
Pediatrician
Perfumer
Petrologist
Pharmacist
Photoengraver
Photogeologist
Photographer
Philologist
Physician
Physicist
Physiologist
Pianist
Pierman
Pilot
Pipeman
Plasterer
Playwright
Pleater
Podiatrist
Policewoman
Polisher
Porter
Postmaster
Poultryman
Preparer
President
Presser
Principal
Printer
Producer
Prospector
Psychiatrist
Psychologist
Puncher
Puppeteer
Purchaser

Quartermaster

Radiologist
Radioman
Raker
Rancher
Receptionist
Recorder
Repairman
Reporter
Retoucher
Rigger
Riveter
Roofer

Sailor
Salesman
Sampler
Sandblaster
Sander
Scavenger
Scientist
Scorer
Sculptor
Sealer
Seamstress
Secretary
Seismologist
Serologist
Serviceman
Shepherd
Sheriff
Shipfitter
Shipper
Shoemaker
Sizer
Sketcher
Skycap
Sociologist
Solicitor
Soloist
Sorter
Specialist
Specialization
Specialize
Sprayer
Spreader
Stableman
Stacker
Stapler
Starcher
Statistician
Stenographer
Stenciler
Steward
Stewardess
Stevedore
Sterilizer
Stovecutter
Superintendent
Supervisor
Surgeon
Surveyor

Tagger
Tailor
Taster
Taxidermist
Teacher
Teamster
Technician
Technologist
Telegrapher
Tester
Timberman
Timekeeper
Tinter
Trainer
Translator
Trapper
Tutor
Typist

Umpire
Unerwriter
Upholsterer
Usher

Valet
Varnisher
Veterinarian
Violinist

Waiter
Warden
Watchman
Weaver
Weigher
Welder
Woodworker
Worker
Wrapper
Wrecker
Writer

Yardman
Yeoman

Zoologist

UNDERSTANDING SELF AND OTHERS

Generalizations:

1. As a person improves his personal qualifications and acquires skills, his opportunities for employment tend to increase.
2. Both employers and employees make contributions to the job which can result in mutual satisfaction and effective job performance.
3. When one has an accurate concept of himself, he has a sound basis for making himself employable.
4. Continuous educational and career plans enable one to take advantage of educational and other opportunities for increasing employability.

Objectives:

Upon completion of this unit, the student should be able to accomplish the following objectives:

1. To demonstrate, through the ability to get along with others, increased maturity, self-understanding and understanding of others.
2. To list at least five personality traits that one must acquire to be successful at school and in the world of work.
3. To demonstrate, by improved personal appearance, the importance of being well groomed and the factors that affect it.
4. To demonstrate the ability to make independent and rational decisions when analyzing case studies.
5. To discuss orally or in written form the tangible and intangible advantages of personal efficiency.

6. To identify attitudes and characteristics which contribute to success in school and on the job.

7. Make a personal educational and vocational plan based on interests, skills, and capabilities.

WHAT ARE MY INTERESTS

INSTRUCTIONS TO STUDENT:

If you had to select one or more of the jobs below, which do you think would be most interesting? Check as many as you find of interest to you--numbering them in the order of your preference.

GROUP A

______ Auto Mechanic

______ Handy Man in a "Fix it Shop"

______ Shop Apprentice

GROUP B

______ Bookkeeper

______ Bank Teller

______ Timekeeper

GROUP C

_____ Laboratory Technician

_____ Analytic Chemist

_____ Draftsman

GROUP D

_____ Automobile Salesman

_____ Sales Clerk

_____ Household Appliance Demonstrator

GROUP E

______ Stenographer

______ File Clerk

______ Comptometer Operator

GROUP F

_____ Musician

_____ Commercial Artist

_____ Clay or Wood Modeler

SUCCESSFUL DEVICES IN GUIDANCE AND COUNSELING
Rudolph F. Wagner

CAREER EDUCATION FIELD TRIP REPORT

Name____

Place visited____________________ Date____________

Department visited______________________________

Guide's name__________________________________

List the various occupations you observed (use back of page if necessary):

1.____

2.____

3.____

4.____

List any health or safety hazards you observed:

____

____

List any skills that you observed in action:

____

____

What did you find most interesting?

What did you find least interesting?

Opinions from workers about their jobs:

Did the workers seem happy?

How do you make application for a job there?

HOW I PLAN TO ACHIEVE MY CAREER GOALS

Name of Occupation ______________________________

Description of duties ______________________________

____

Aptitudes Required	How I rate My Aptitudes		
	Below Average	Average	Excellent

Necessary Personality Traits	How I Rate In These Personality Traits		
	Below Average	Average	Excellent

Education or Training Required	Further Education or Training I Need

Other Requirements	How I can fulfill these Requirements

Suggested Teaching-Learning Approaches for Career Development in the Curriculum, University of Minnesota College of Education.

COMMUNICATIONS OCCUPATIONS

W	R	I	T	E	R	K	L	O	Z	A	L	C	R	I	T	I	C	M	O	I	S	O	A
A	P	T	A	O	E	O	C	L	E	R	T	U	L	K	Z	Y	O	T	L	I	I	S	N
C	R	O	C	Z	P	L	O	O	X	T	F	Y	E	J	F	T	R	L	T	L	N	J	N
R	U	U	T	C	O	L	U	M	N	I	S	T	C	Z	O	C	R	A	A	L	S	A	O
E	Z	X	R	M	T	N	O	P	B	T	V	W	U	Y	T	T	S	R	O	S	R	P	N
S	O	O	T	L	E	D	I	T	O	R	O	T	R	O	O	U	P	S	E	T	U	E	C
S	I	N	T	E	R	P	R	E	T	E	R	R	E	T	R	E	O	L	E	R	C	L	E
A	Q	W	E	R	T	Y	U	I	O	P	L	K	R	T	R	A	N	S	L	A	T	O	R
A	U	C	T	I	O	N	E	E	R	Z	X	C	V	B	N	M	D	O	T	T	O	T	E
P	S	T	O	O	Z	A	E	R	T	P	U	B	L	I	S	H	E	R	T	O	R	Z	K
T	S	O	H	L	K	R	T	N	M	B	M	H	V	R	H	T	N	R	N	R	H	M	P
A	S	D	F	O	H	G	J	K	L	M	N	B	V	C	X	Z	T	E	A	C	H	E	R
Q	W	E	R	T	R	N	E	W	S	B	O	Y	Y	U	I	O	P	M	N	M	B	X	T

WORD LIST

Writer
Reporter
Columnist
Journalist
Editor
Interpreter
Auctioneer
Publisher
Critic
Correspondent
Teacher
Translator
Announcer
Actor
Lecturer
Artist
Illustrator
Actress
Instructor
Author
Newsboy

Find the Words listed above among the scrambled letters and circle.

The words may be spelled vertically, horizontally or diagonally.

ACTIVITY: RANK 20 OCCUPATIONS

AIM: To get an idea of student attitudes toward various occupations

To attempt to work toward the attitude that it is not the job but the person that makes the difference in success on the job.

To stimulate discussion about job attitudes

Description: Hand out ditto sheets. Have students rank the occupations in the order that they feel they should be. There should be little discussion prior to the first ranking other than how to rank. Occupations that are not known may be described very briefly, e. g., "Medical technician works in a lab," or "Pharmacist works with medicines in a drugstore."

After the initial ranking, discuss the jobs more fully. Use questions such as "What would happen if the street cleaner (etc.) did not do his work?" Discussion might go like this--Trash and litter would build up in the street. Tires would be punctured causing people to be late or miss appointments. Children might be hurt in the litter. Wind might blow litter causing injury to pedestrians.

After the discussion have students fold the first ranking back out of sight and re-rank on the right hand column. Compare left and right hand columns and discuss any changes, especially--why.

Rank the following 20 occupations in their order of importance according to the way you feel about them.

__________ 1. Street cleaner __________

__________ 2. Barber __________

__________ 3. Doctor __________

__________ 4. Laborer __________

__________ 5. Truck driver __________

__________ 6. Pharmacist __________

__________ 7. Lawyer __________

__________ 8. Highway Patrolman __________

__________ 9. Fireman __________

__________ 10. Cosmetologist __________

__________ 11. Nurse __________

__________ 12. Teacher __________

__________ 13. Radio announcer __________

__________ 14. Carpenter __________

__________ 15. Medical technician __________

__________ 16. Dishwasher __________

__________ 17. Cook __________

__________ 18. Telephone Operator __________

__________ 19. Grocery clerk __________

__________ 20. Mechanic __________

ACTIVITY: ATTITUDE TOWARD WORK

AIM: Attempt to present a realistic picture of where work fits into a life schedule
Show how much time is involved in work

Description: Mimeographed copies of numbers of hours spent working, sleeping, etc. Begin discussion with fact that an adult has about 456,250 hours of life to use up from age 20 to age 70.

Have discussion. Fill out the hand-out sheet.

Discuss some of the guesses. Probably most students will be able to fill out the chart reasonably well.

Try to lead up to the question. "Why is it important that the worker enjoy his job?", "What effect will a disagreeable job have on the rest of a person's time?", or finally, "How can a person be sure of getting an enjoyable job?"

If a person works at a full-time job starting at age 20 he will have a working life of about 50 years. In hours this is about 456,250 hours total time. Fill out the chart below (in hours) for each of the listed activities.

__________________________ hours spent working, that is actually performing the motions

__________________________ hours spent eating, going to and from work, unwinding after work, shaving, dressing to go to work, etc.

__________________________ hours spent on vacations, weekends, off duty, not doing work related activity

__________________________ hours spent sleeping or tossing and turning

Why is it important that a person enjoy his work or at least perform work for which he is suited?

What does being suited for work mean to you?

FIND THE OCCUPATION

Mr. Neal, Mr. McMillan, Mr. Jensen, and Mr. Burnett serve the town of Orange as building contractor, banker, doctor, and mechanic--though not necessarily respectively. The doctor earns exactly twice as much as the mechanic, the banker twice as much as the doctor, and the building contractor earns exactly twice as much as the banker.

Mr. Burnett earns more than Mr. Jensen, Mr. Neal does not earn more than Mr. McMillan, Mr. McMillan does not earn more than Mr. Burnett, and Mr. Jensen earns twice as much as Mr. McMillan. What is each man's occupation?

Answer:

Mechanic	Mr. Neal
Doctor	Mr. McMillan
Banker	Mr. Jensen
Building Contractor	Mr. Burnett

NAME THE SCHOOL

(Draw a line connecting the TV personality to the school he might have attended.)

1. Marcus Welby
2. Ironsides
3. Josephine
4. Barney on "Mission Impossible"
5. Madge
6. Keith Partridge
7. Fifth Dimension
8. "That Girl"
9. Owen Marshal
10. Julia
11. McCloud
12. Pete Dixon
13. Mary Richards
14. Professor Howard
15. Doris Martin

A. Vocational-Technical
B. Nursing
C. Medical
D. Teachers' College
E. Cosmetology
F. Law
G. Plumbers
H. Journalism
I. Journalism
J. Fashion Institute
K. Music
L. Business

THEY WORK TO SERVE YOU

Some people work to make things. The carpenter makes houses. The farmer grows corn. Some people make toys. Other people make tools; but some people work to serve you.

The____________ The____________ The____________________

Can you tell which of the following workers produce a service.

Cross out the ones which do not belong here.

Policeman
Airline Hostess
Book Publisher
Cab Driver
Car Maker
Plumber
Baker
Newspaper boy
Doctor

Find out what the parents of your classmates do. Write their jobs in the proper place below.

Produce a Service	Produce a Product
____________________	________________________
____________________	________________________
____________________	________________________
____________________	________________________
____________________	________________________

COMMUNICATING A THOUGHT

How many ways have you used to communicate?

__________Talking

__________Telephone

__________Leaving a note

____________Writing a letter

____________Telegram

____________Signaling with your hands

Some people want to communicate to thousands or millions of people at one time. What can they use to communicate their thoughts? A magazine is one way.________ __________ ______

Have you ever visited a post office? Name two workers who help us send a letter. ___________ ___________ __________

Have you ever visited a telephone company? Name two workers we need if we are to be able to call anyone we want.

______________ ________________ __________________ ________

Find out what these communications workers do.

TV Announcer

Type Setters

Telephone Operators

Advertising Man

Repairmen

Linemen

Main Sorter

News Reporter

Proofreaders

Radio Broadcasters

Broadcast Technician

Telegrapher

What kind of communications worker would you rather be? Find a picture or draw a picture of this worker or of something about this work. Tape it on the next page and write about the kinds of things this worker would do on the job.

If I were a communications worker, I would want to be a

____.

IF THIS WERE YOU

1. What kind of worker should he be? Should he wear a policeman's cap, a postman's cap, a pilot's cap, a carpenter's cap, a farmer's hat, or no hat at all? Would he wear overalls, a business suit, a uniform, or an apron. Avoid stereotype descriptions.

   Finish the picture as you think he should be done. If he needs any special tools, you can draw them around him.

IF THIS WERE YOU

2. What kind of worker should she be? Should she wear a stewardess' cap, a nurse's cap, a waitress' cap, or no cap at all? Would she wear a uniform, a house dress, a business dress, or an apron? Avoid stereotype description.

   Finish the picture as you think she should be. If she needs any special tools or equipment, you can draw them around her.

QUESTIONNAIRE FOR STUDENTS TO BE USED IN THE DEVELOPMENT OF AN OCCUPATIONAL INFORMATION PROGRAM

1. Are there any jobs that you would like to do when you leave school?

2. Have you ever done anything like the jobs you listed above?

3. What kinds of information would you like to have about the jobs you listed in No. 1 above?

4. How much do you know about yourself? (Which of these would you rather be or do?)

Rich or not so rich

Live in small or large town

Work indoors or outdoors

Work alone or with others

Like routine or change

Patient or impatient

Work with hands or head

Neat or sloppy

Like detail or dislike detail

Lay around or keep busy

5. What else do you think you need to know about yourself if you are going to select a job?

STINK-PINK (Fun)

This is a verbal quessing game. Clues are given by the teacher and the answer is a pair of rhymed words.

For one syllable answers: (HEALTH)
Teacher: "Stink-Pink: I wear a white uniform and ride in a long black limousine. I am a . . . ?"

Student: (Gleefully): "Hurse Nurse"!

For two syllable answers: (LANGUAGE ARTS)
Teacher: "Stinky-Pinky": I work with pen and paper to create stories. I wear a tall hat such as those worn by bishops. People call my hat the . . . ?"

Student: (Chuckeling): "Writer Miter"

Note: Language Arts teachers can incorporate vocabulary words, here, as well as occupations.

For three syllable answers: (BIOLOGY)
Teacher: "Stinkely-Pinkely": I am the worst plant student in the class. You could call me the . . . ?"

Student: (Joyfully): "Rottenist Botanist"

Note: Teacher cluse should not include any form of the word in the expected answer. Change the order--students quiz teacher or each other.

WHO PROVIDES OUR FOOD?

Let's take a closer look at where our food comes from. Suppose you have a peanut butter and jelly sandwich - where did it all start? Well, it started with someone putting seeds in the ground. Who was this?_______________. We don't have bread farms or peanut butter farms or jelly farms. What kind of seeds were planted?

For the bread-------------------------______________________

For the peanut butter----------------______________________

For the jelly-------------------------______________________

(Strawberry, grape)

Can you name the country in which these seeds might have been planted?
The seeds for:

The bread in-------------------------______________________

The peanut butter in-----------------______________________

The jelly in-------------------------______________________

What kind of work had to be done to these seeds and plants before they were ready to be sold to the next worker?_________

____

____

____

____

What workers are needed to get the farm products to the plants where it is processed into bread and peanut butter and jelly?

____

Foods are probably shipped over land by_______or__________.

Foods are usually shipped over oceans by______or__________.

The wheat must go to a________mill and then to the________ to be made into bread.

The flour must be made into bread, the peanuts turned into peanut butter and the fruit processed into jelly. Have you ever visited a bakery to watch them bake and package bread? Have you ever watched your mother take fresh fruit and make it into jelly? After the farmer's products are made into food and packaged, it is usually sold to a wholesale dealer. What is the job of a wholesale dealer? The wholesale dealer has salesmen and delivery trucks. What do you suppose their jobs are?

____

____

____

Now the bread and peanut butter and jelly are delivered to a store for you to buy them. They have made a long and interesting journey. They have gone from the seed to the grocery shelf. Which part of their journey would you most like to work on? What would you most like to work on? What would your job be like?

____

____

____

Can you trace the journey of a roast beef?

Do you know what workers are needed to bring us salt for our table?

Dairy farmers are also food providers. How many different places need milk or cream for their food products?

____

____

____

OCCUPATIONS RELATED TO GEOGRAPHICAL LOCATIONS

STATE	CAPITAL	PRODUCTS AND INDUSTRY	LIST A COUPLE OF OCCUPATIONS APPLICABLE TO EACH STATE'S INDUSTRY
ALABAMA	MONTGOMERY	lumbering, iron, steel livestock, tobacco	
ALASKA	JUNEAU	timber, fish, mining	
ARIZONA	PHOENIX	gold, silver, copper, garden crops, cotton, citrus fruits	
ARKANSAS	LITTLE ROCK	petroleum, lumber, rice, cattle, cotton	
CALIFORNIA	SACRAMENTO	citrus fruits, fish cotton, lumber, shipping	
COLORADO	DENVER	garden crops; gold, silver, sugar beets, orchards	
CONNECTICUT	HARTFORD	brass articles, clocks, hats, hardware, ship and airplane building	
DELAWARE	DOVER	apples, tomatoes, poultry, dynamite, chemical products	
FLORIDA	TALLAHASSEE	oranges, tobacco, lumber, garden crops, canning	
GEORGIA	ATLANTA	peaches, marble, cotton goods, peanuts, lumber	
IDAHO	BOISE	apples, potatoes, wheat, sheep, dairies, minerals, lumber	
ILLINOIS	SPRINGFIELD	corn, steel, meat, soybeans, printing	
INDIANA	INDIANAPOLIS	steel, automobiles, limestone, farming, hogs	
IOWA	DES MOINES	corn, hay dairy products, hogs, pop corn, breakfast cereal	
KANSAS	TOPEKA	wheat, salt, flour, petroleum and livestock	

STATE	CAPITAL	PRODUCTS AND INDUSTRY	LIST A COUPLE OF OCCUPATIONS APPLICABLE TO EACH STATE'S INDUSTRY
KENTUCKY	FRANKFORT	hay, tobacco, corn, coal, horse breeding	
LOUISIANA	BATON ROUGE	rice, cotton, minerals, lumber, sugar cane, chemicals	
MAINE	AUGUSTA	potatoes, fishing, paper, textiles, shipbuilding	
MARYLAND	ANNAPOLIS	steel, tobacco, clothing, fishing, fruit and vegetables	
MASSACHUSETTS	BOSTON	fish, shoes, dairies, cotton, goods, machinery	
MICHIGAN	LANSING	automobiles, cereal, lumber, furniture, fruits	
MINNESOTA	ST. PAUL	corn, flour, oats, dairies, iron	
MISSISSIPPI	JACKSON	cotton, lumber, oil, garden crops, fish	
MISSOURI	JEFFERSON CITY	lead, meat, shoes, soybeans, cotton	
MONTANA	HELENA	lead, copper, oil, poultry, wheat	
NEBRASKA	LINCOLN	wheat, meat packing, cattle, pigs, corn	
NEVADA	CARSON CITY	copper, silver, gold, sheep, garden crops	
NEW HAMPSHIRE	CONCORD	dairies, granite, textiles, lumber, hay	
NEW JERSEY	TRENTON	silk goods, chemicals, poultry, gasoline, vegetables	
NEW MEXICO	SANTA FE	wheat, copper, cotton, sheep, cattle	
NEW YORK	ALBANY	clothing, books, dairy products, manufacturing	

STATE	CAPITAL	PRODUCTS AND INDUSTRY	LIST A COUPLE OF OCCUPATIONS APPLICABLE TO EACH STATE'S INDUSTRY
NORTH CAROLINA	RALEIGH	tobacco, peanuts, lumber, cotton goods, textile mills	
NORTH DAKOTA	BISMARCK	wheat, dairy products livestock, rye	
OHIO	COLUMBUS	rubber, clay products, dairy products, machinery	
OKLAHOMA	OKLAHOMA CITY	petroleum, cattle, cotton, wheat, corn	
OREGON	SALEM	orchards, lumber, fish, flour, berries	
PENNSYLVANIA	HARRISBURG	electric machinery, coal, steel, textiles, shipbuilding	
RHODE ISLAND	PROVIDENCE	silk and cotton goods, garden crops, tools, silverware, machinery	
SOUTH CAROLINA	COLUMBIA	tobacco, corn, hogs, cotton goods, peanuts	
SOUTH DAKOTA	PIERRE	gold, corn, wheat, pigs, meat packing	
TENNESSEE	NASHVILLE	livestock, tobacco, zinc, marble, cotton, chemicals, aluminum	
TEXAS	AUSTIN	sheep, cattle, sorghum, petroleum, cotton	
UTAH	SALT LAKE CITY	copper, lead, coal, uranium, garden crops	
VERMONT	MONPELIER	maple sugar, paper, marble, slate, dairies, woolen mills	
VIRGINIA	RICHMOND	peanuts, tobacco, coal, shipbuilding, poultry, chemicals	
WASHINGTON	OLYMPIA	wheat, apples, fish, lumber, dairies, aircraft buidling	
WEST VIRGINIA	CHARLESTON	coal, apples, glass, lumber, chemicals	

STATE	CAPITAL	PRODUCTS AND INDUSTRY	LIST A COUPLE OF OCCUPATIONS APPLICABLE TO EACH STATE'S INDUSTRY
WISCONSIN	MADISON	paper, machinery, dairy products, breweries	
WYOMING	CHEYENNE	sheep, sugar beets, petroleum, wheat, cattle, coal	
HAWAII	HONOLULU	sugar, pineapples, cattle, fishing, coffee	

VOCATIONAL GROUPING

Some workers prefer to work mostly with other people. They like to try to persuade them to buy something, or to make them happy, or to make them feel better. Other workers prefer to work with ideas, to think up things, or to solve problems. Still other workers prefer to work with their hands and tools.

Can you figure out which workers deal mostly with people or ideas or things? Put (P) after the worker who deals mostly with people, and (I) after the worker who deals mostly with ideas, and (T) after the worker who likes to work with things like his hands and tools.

EXAMPLE: Artists I Cabinetmaker T Doorman (hotel) P

_____Actor

_____Air traffic controller

_____Pilot

_____Stewardess

_____Architect

_____Automobile salesman

_____Beautician

_____Carpenter

_____Chef

_____Draftsman

_____Editor

_____Electrician

_____F B I Agent

_____Florist

_____Geologist

_____Insurance agent

_____Miner

_____Mathematician

_____Nurse

_____Oceanographer

_____Optometrist

_____Plumber

_____Policeman

_____Radio or TV Announcer

_____Teacher

_____Truck driver

_____Waitress

Name each state

A.____________________

B.____________________

C.____________________

D.____________________

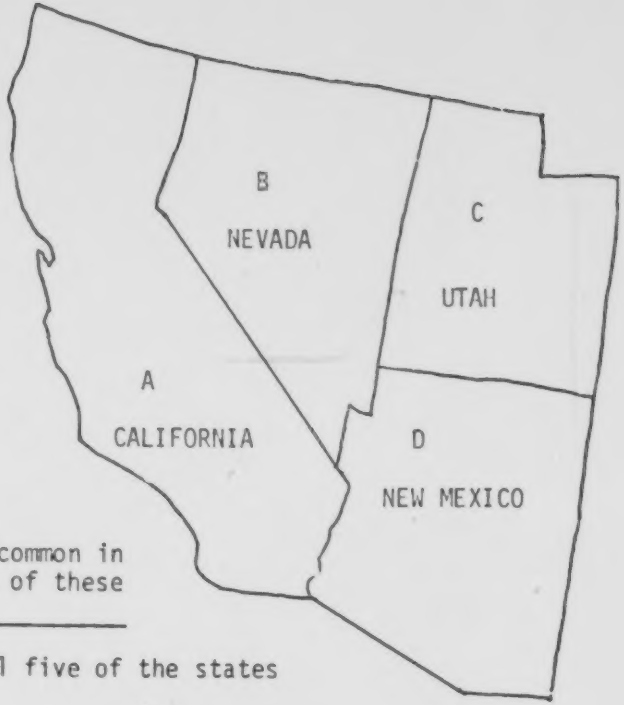
For each state, name a worker who would be common there, but rather uncommon in Nebraska.

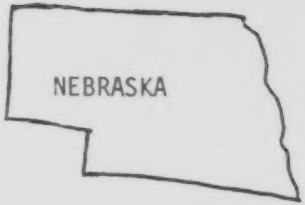
A.____________________

B.____________________

C.____________________

D.____________________


B
NEVADA
C
UTAH
A
CALIFORNIA
D
NEW MEXICO



Can you name a job which would be common in Nebraska but not too common in any of these other states?____________________________

Name six jobs you would find in all five of the states outlined on this page.

1.____________________ 2.____________________ 3.____________________

4.____________________ 5.____________________ 6.____________________

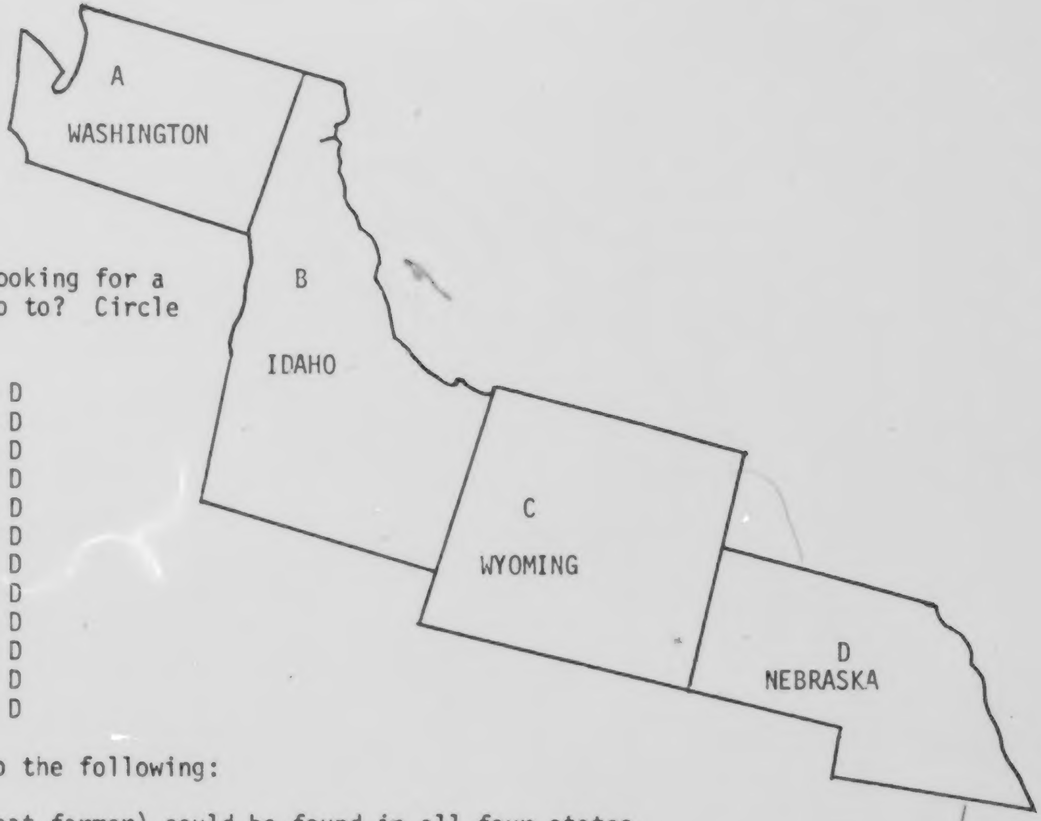
Name each state

A.____________

B.____________

C.____________

D.____________



If the following people were looking for a job, which state should they go to? Circle one state for each worker.

1. Lumberjack A B C D
2. Wheat farmer A B C D
3. Fisherman A B C D
4. Rancher (cattle) A B C D
5. Rancher (sheep) A B C D
6. Meat Packer A B C D
7. Aircraft designer A B C D
8. Coal miner A B C D
9. Fruit picker A B C D
10. Potato farmer A B C D
11. Truck farmer A B C D
12. Shipyard worker A B C D

Underline the correct answer to the following:

The (lumberjack, coal miner, wheat farmer) could be found in all four states.
The (fruit picker, meat packer, sheep rancher) is found primarily in Nebraska.
The climate in Nebraska is not right for the (aircraft designer, wheat farmer, fruit picker).
Washington is the only state with facilities for the (Lumberjack, fisherman, wheat farmer).

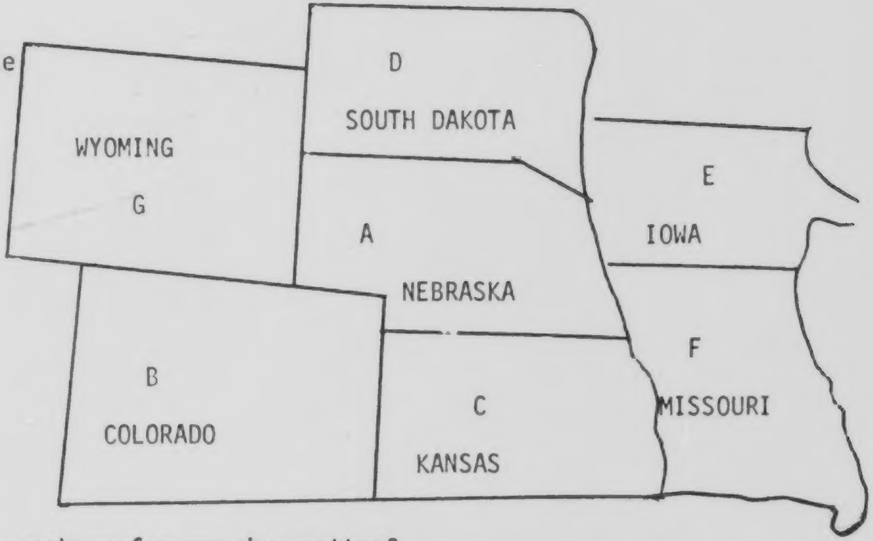
Name each state

A.______________ B.______________ C.______________ D.______________ E.______________

F.______________ G.______________

Which five of the following workers would be most apt to find work in these states? Underline your answer.

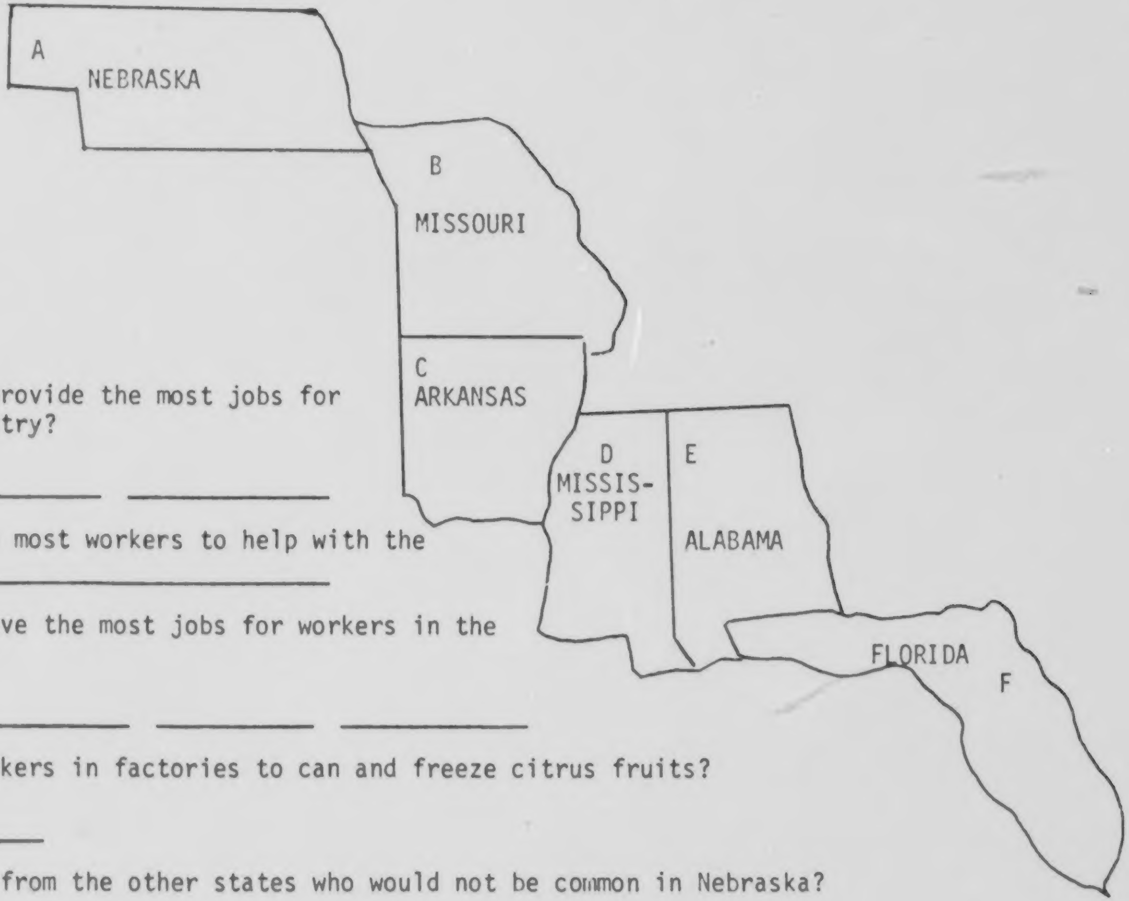
auto mechanic
tobacco grower
peanut harvester
miner
lumberjack
farm worker
meat packer
oil driller
salmon fisherman
ship builder


D
SOUTH DAKOTA
WYOMING
G
E
IOWA
A
NEBRASKA
F
B
COLORADO
C
MISSOURI
KANSAS

Which of these seven states might hire workers for growing cotton?______________

Which of these seven states would be most apt to hire people to work in orchards?______________

Which state would need more workers for factories making pop corn and breakfast cereal?__________


A
NEBRASKA
B
MISSOURI
C
ARKANSAS
D
MISSIS-
SIPPI
E
ALABAMA
FLORIDA
F

Name each state

A.__________

B.__________

C.__________

D.__________

E.__________

F.__________

Which three states would provide the most jobs for people in the cotton industry?

__________ __________ __________

Which state would need the most workers to help with the tourist trade?__________

Which four states would have the most jobs for workers in the lumber industry?

__________ __________ __________ __________

Which state would need workers in factories to can and freeze citrus fruits?

____

Can you list five workers from the other states who would not be common in Nebraska?

__________ __________ __________ __________ __________

Name each state

A.______________ B.______________ C.__________________

D.______________ E.______________

Identify each of the five states by their industrial character. Write in the appropriate state after each description.

1. Minerals, cotton, sorghum, rice, cattle, sheep, citrus fruits, textiles, petroleum________________

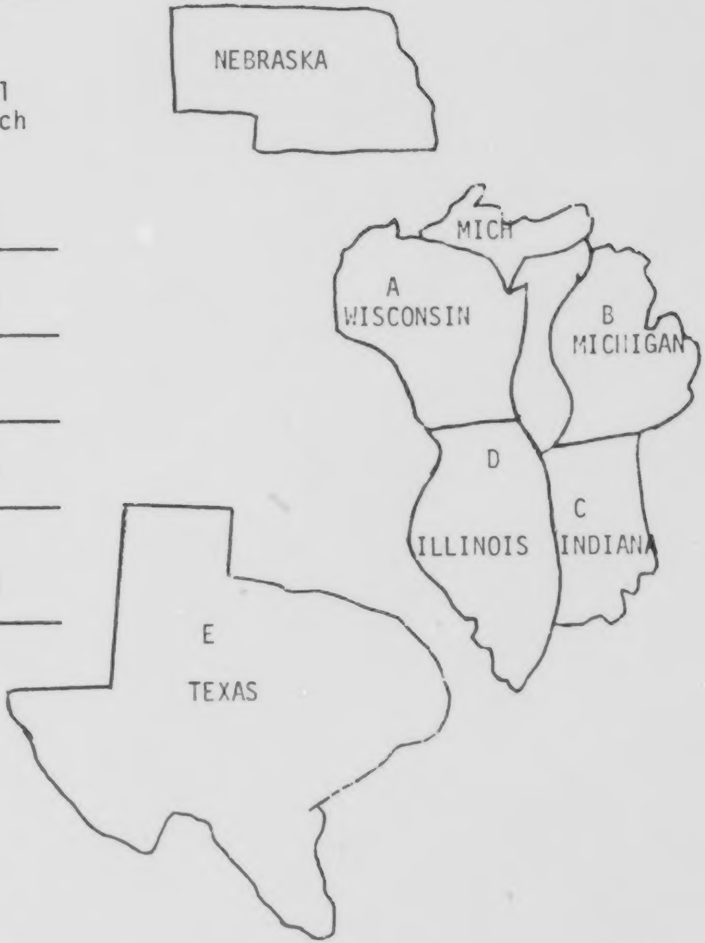
2. Dairies, breweries, cheese factories, shipping, paper mills________________

3. Fresh water fisheries, breakfast food plants, auto factories, furniture________________

4. Soybeans, meat packing, printing plants, grain, steel, coal________________

5. Grain, fruit, tobacco, coal, farm machinery products, auto and airplane parts manufacturing limestone________________

Discuss how the jobs available in these states differ from the jobs available in Nebraska.

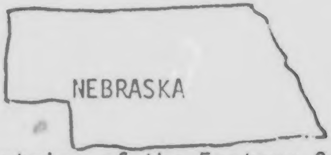


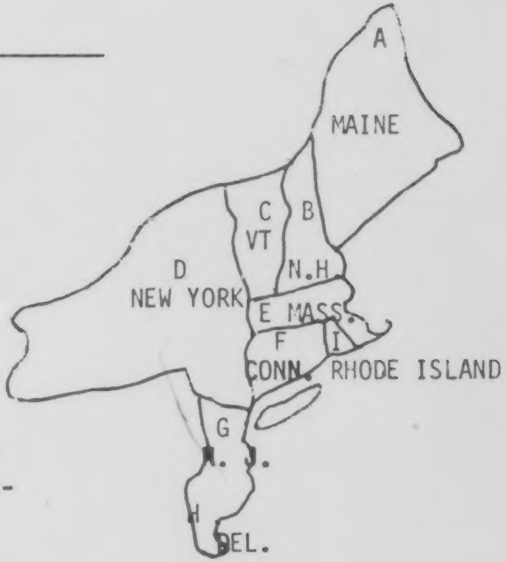
Name each state

A.__________ B.__________ C.__________ D.__________

E.__________ F.__________ G.__________

H.__________ I.__________




A
MAINE
C
B
VT
N.H
D
NEW YORK
E
MASS.
F
I
CONN.
RHODE ISLAND
G
N. J.
H
DEL.

Listed below are some of the industries of the Eastern Coast. Can you name at least one job that would need workers as a result of this specific industry? Refer to definitions in this section. EXAMPLE: Citrus Fruits - fruit pickers

1. Dairies__________
2. Shipping__________
3. Precision tool factories __________
4. Airplane construction__________
5. Ship building __________
6. Jewelry making__________
7. Building stone quarries__________
8. Manufacture of electrical equipment-__________
9. Paper products plants__________
10. Lumber industries__________
11. Cotton growing__________
12. Manufacture of leather goods and shoes__________

Children can gain insight into the geographic variance of occupations by comparing the industrial patterns in different areas of the state or in different states or counties. Consideration can be given to many categories including:

- Government agencies
- Transportation
- Manufacturing
- Professions
- Technical trades
- Agriculture
- Lumbering
- Tourism
- Mining
- Construction

"WHAT'S MY LINE?"

(Two Examples)

I use a closed white truck in my work.
I visit each home about twice a week.
I must be strong to do my work.
I help keep you healthy.
Who am I? (Garbage Collector)

I come to your house every day except Sunday
I wear a uniform.
I sometimes bring you surprises in packages.
I carry a leather bag over my shoulder or in a motorcart.
Who am I? (Postman)

Check the students cultural environment awareness.

A quick way to check the students' observation and recall would be to have each student stand and name a worker in their community. This could be elaborated on to include various information about the vocations involved i.e., tell why you would or would not like to do this job, tell how we are trained for this job. The same idea could be used to discuss workers that are not found in the community.

Study the successful people you know.

This should begin with a discussion and initial comprehension of what kinds of success there really are. It is misleading to think only in terms of financial success. It is potentially of great value for a dialogue to take place between goal-setting youngsters and people who have achieved or are achieving a variety of worthwhile goals. Having one or two children visit such a person or have such a person come into your classroom offers great possibilities. Questions could cover such items as:

Why did you choose your field of work?
What did you want to be when you were of elementary age?
How does one achieve what you did-or get a job like yours?
What are the interesting things about your work?
What is the future of your work?

COMMUNICATIONS OCCUPATIONS

W R I T E R K L O Z A L C R I T I C M O I S O A

A P T A O E O C L E R T U L K Z Y O T L I I S N

C R O C Z P L O O X T F Y E J F T R L T L N J N

R U U T C O L U M N I S T C Z O C R A A L S A O

R Z J O U R N A L I S T P T O T A E R L U T T U

E Z X R M T N O P B T V W U Y T T S R O S R P N

S O O T L E D I T O R O T R O O U P S E T U E C

S I N T E R P R E T E R R E T R E O L E R C L E

A Q W E R T Y U I O P L K R T R A N S L A T O R

A U C T I O N E E R Z X C V B N M D O T T O T E

P S T O O Z A E R T P U B L I S H E R T O R Z K

T S O H L K R T N M B M H V R H T N R N R H M P

A S D F O H G J K L M N B V C X Z T E A C H E R

WORD LIST

WRITER
COLUMNIST
REPORTER
JOURNALIST
EDITOR
INTERPRETER
AUCTIONEER
PUBLISHER
CRITIC
CORRESPONDENT
TEACHER
TRANSLATOR
ANNOUNCER
ACTOR
LECTURER
ARTIST
ILLUSTRATOR
ACTRESS
INSTRUCTOR
AUTHOR
NEWSBOY

FIND THE WORDS LISTED ABOVE AMONG THE SCRAMBLED LETTERS AND CIRCLE.
THE WORDS MAY BE SPELLED VERTICALLY, HORIZONTALLY OR DIAGONALLY.

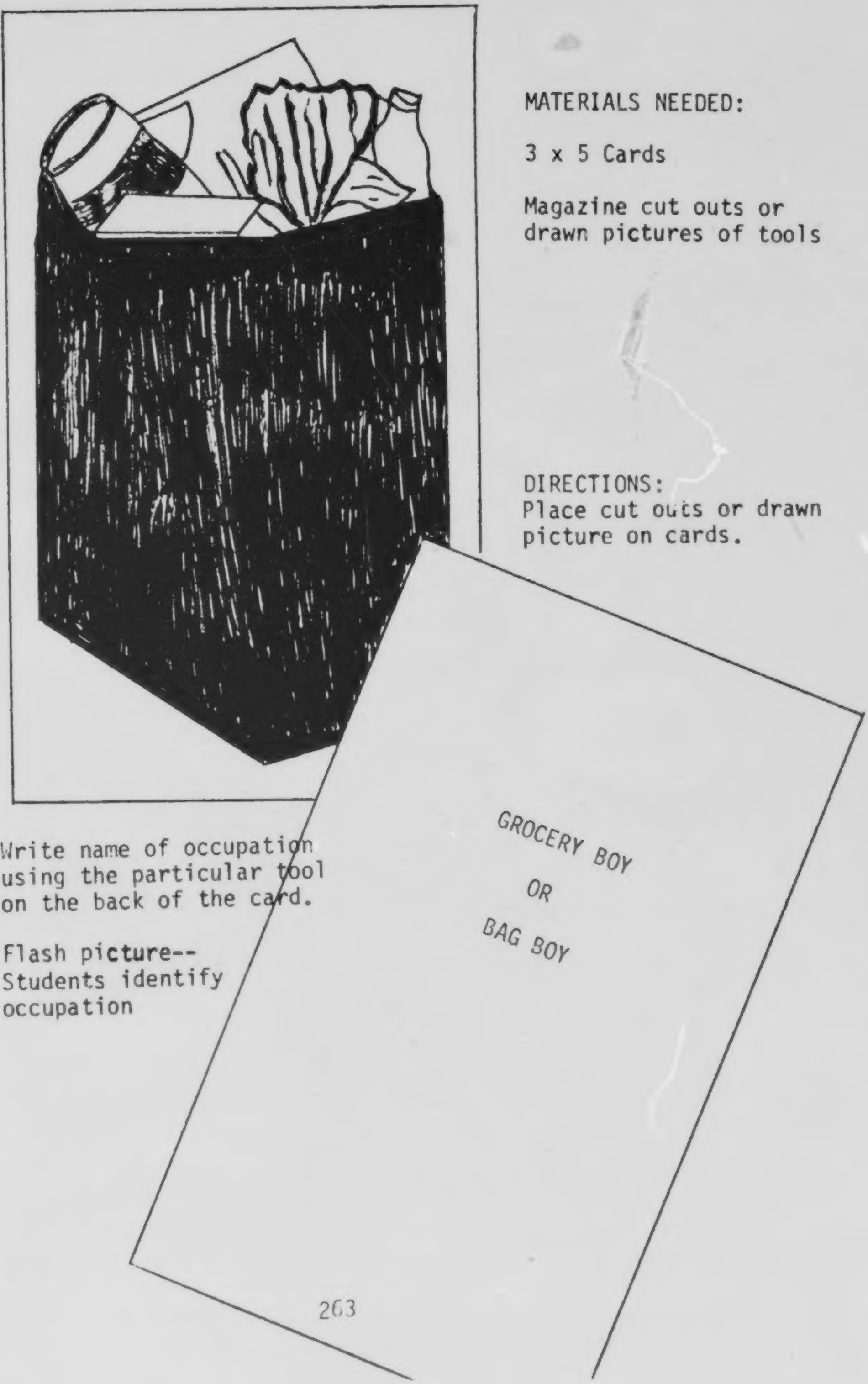
OCCUPATIONAL FLASH CARDS

MATERIALS NEEDED:

3 x 5 Cards

Magazine cut outs or
drawn pictures of tools

DIRECTIONS:
Place cut outs or drawn picture on cards.



Write name of occupation using the particular tool on the back of the card.

Flash picture--
Students identify occupation

OCCUPATIONAL RIDDLES

What worker always walks behind a star?	(Policeman)
What is the President's second occupation?	(Cabinetmaker)
Who may marry many women yet stay single all his life?	(Clergyman)
What is always in front of you, yet can never be seen?	(Your Future)
What worker earns a living but never does a day's work?	(Night Watchman)

Dramatize the relatedness of occupations in acquiring an item.

Example: Purchasing a jump rope.

Little girl: Storekeeper, I have $1.00 to buy a jump rope.

Storekeeper: I will tell my secretary to order one for you.

Secretary: I will order one from the salesman.

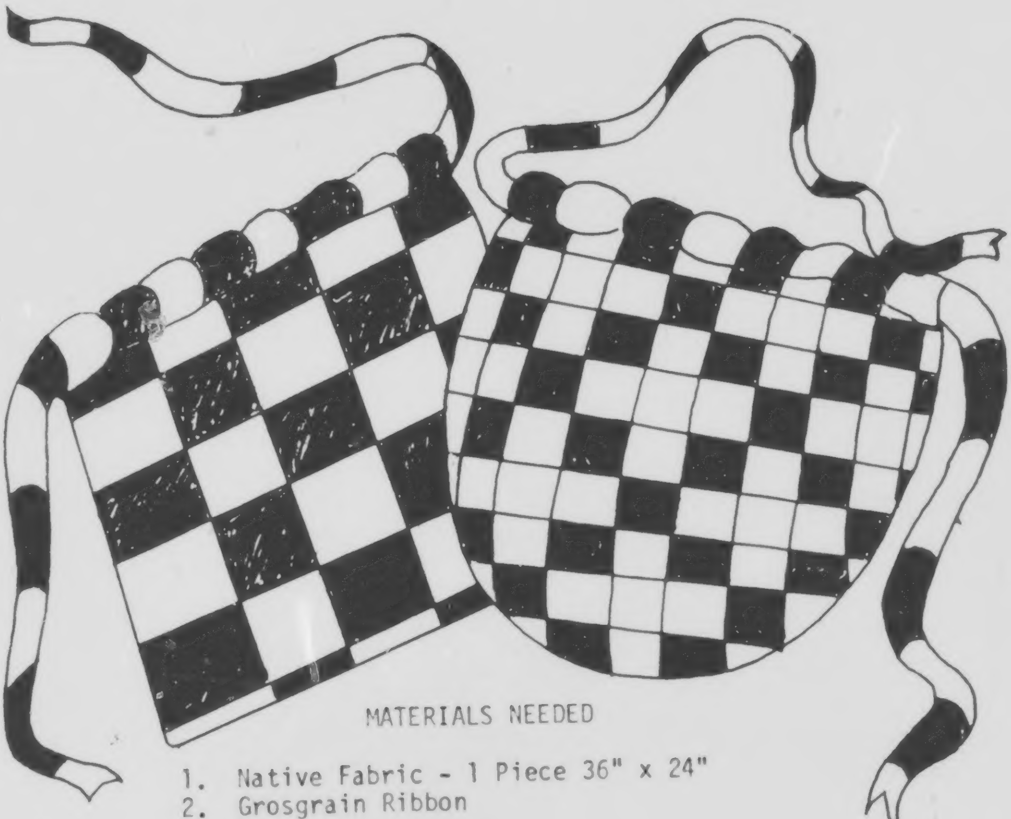
Salesman: I will tell the people at our factory to make one and send it on our delivery truck.

Factory man: To make one for you, I will have to get wood from the lumberman for the handle and cotton from the mill man for the rope.

Lumberman: I will send a lumberjack to chop down a tree and bring us the wood.

Mill man: I will have the farmer pick some cotton and we will make the rope.

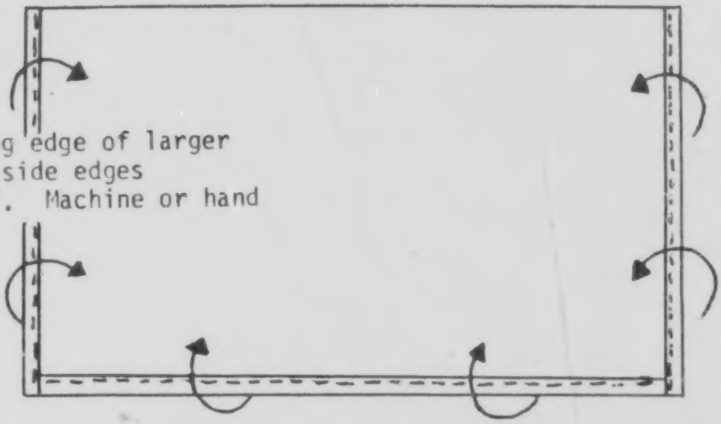
APRON



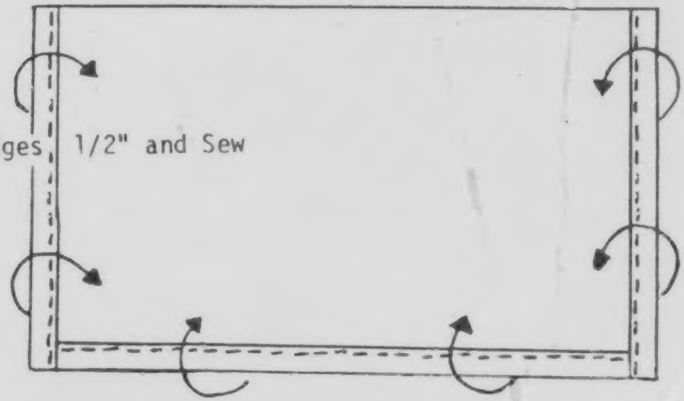
MATERIALS NEEDED

1. Native Fabric - 1 Piece 36" x 24"
2. Grosgrain Ribbon
3. Thread

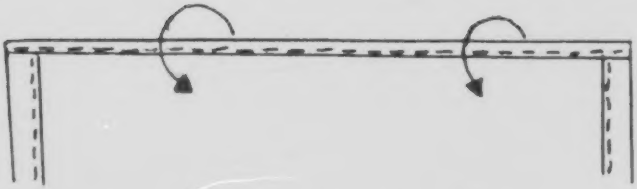
Procedure:



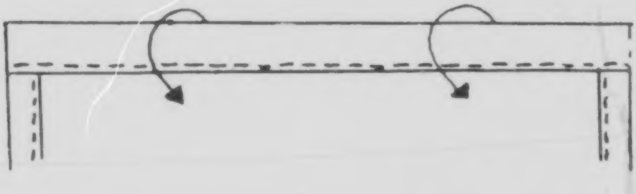
1. Turn under one long edge of larger piece and the two side edges approximately 1/4". Machine or hand sew.



2. Turn under same edges 1/2" and Sew (Hem made).

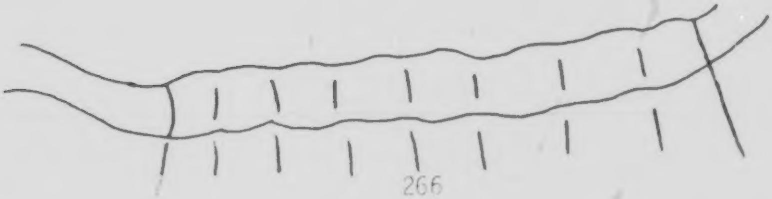


3. Turn under long edge 1/4" and sew.

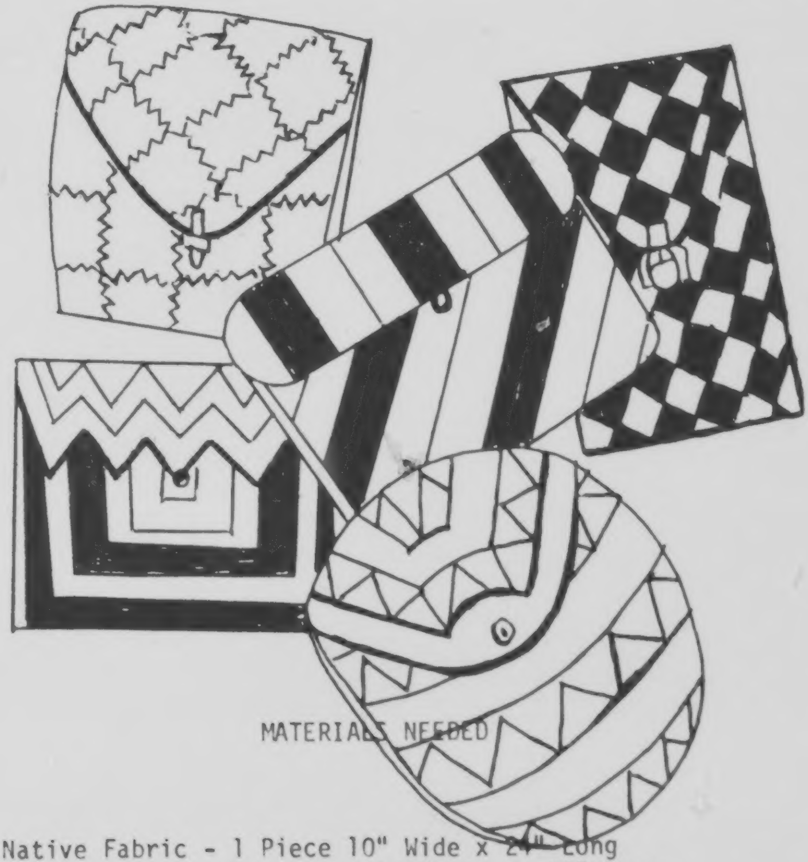


4. Turn same edge under 1 1/2" and sew. Do not stitch ends.

5. Insert grosgrain ribbon through 1 1/2" opening, gathering fabric to form apron.



HAND BAG

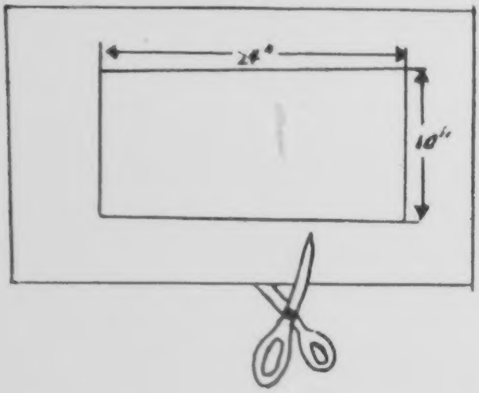


MATERIALS NEEDED

1. Native Fabric - 1 Piece 10" Wide x 24" Long
   1 Piece 2 1/2" Wide x 36" Long
2. Thread
3. Lining (Optional)
4. Closure (Buckle, Button, Snap, etc.)

PROCEDURE:

1. Draw off pattern on paper for purse.

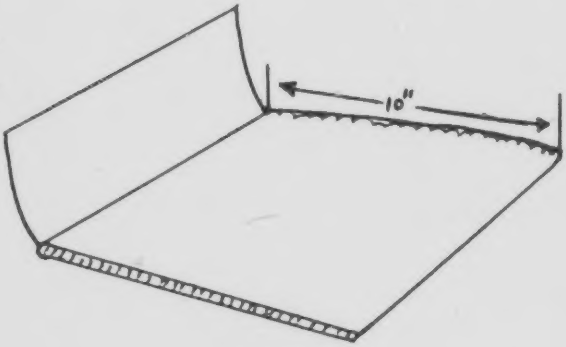


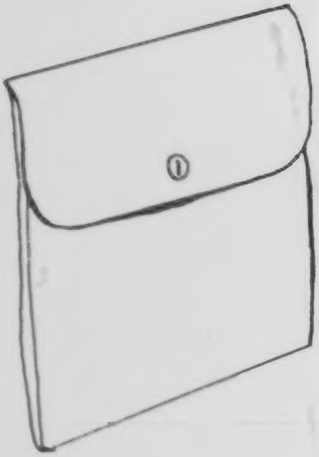
2. Cut out and place on fabric.

3. Cut

4. Line larger piece if desired by cutting a lining the same size and sewing to wrong side of purse fabric.

5. Fold, with wrong sides out, 10" from edge. Sew sides together. Turn right sides out.

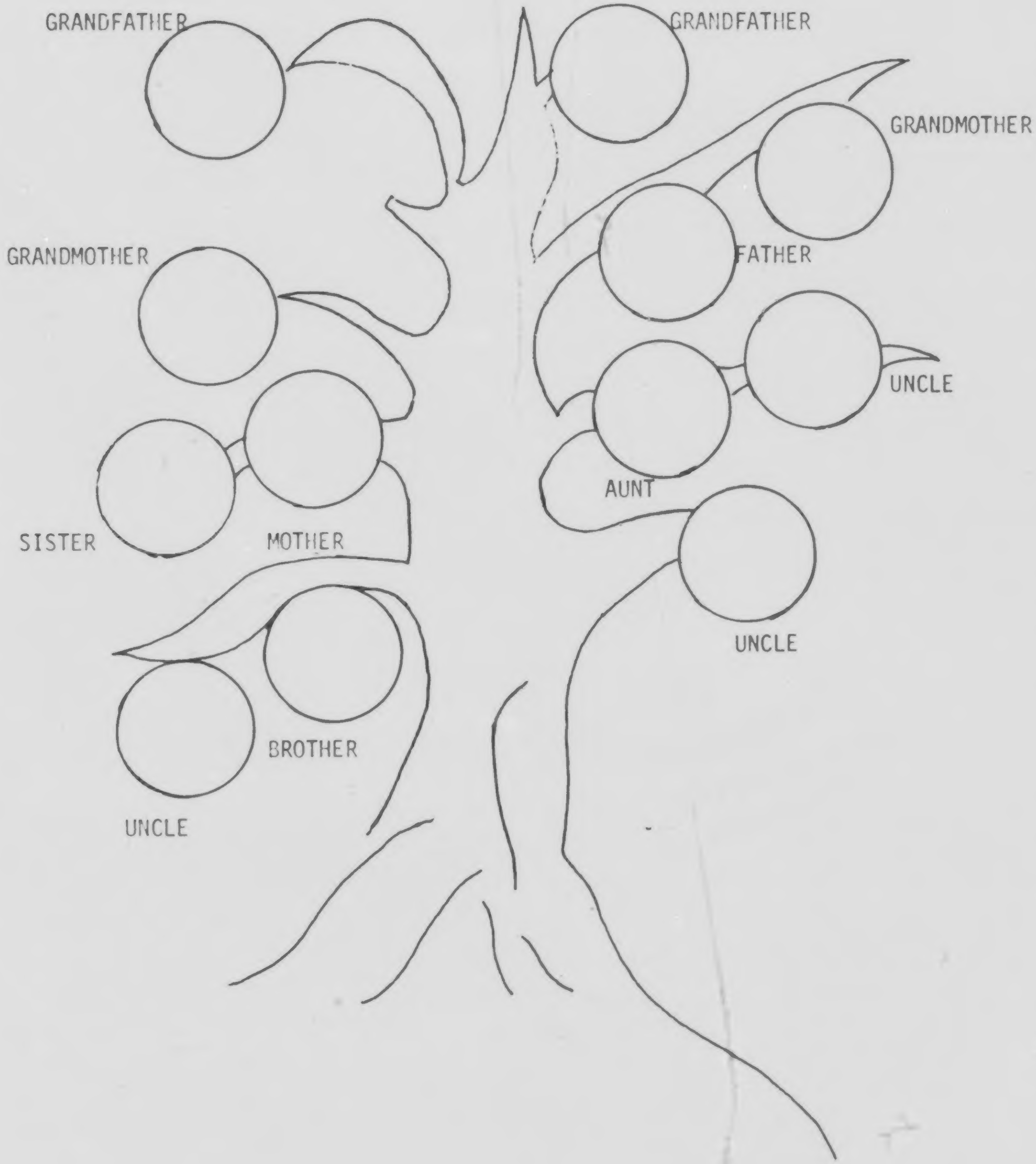




6. To make flap, fold open edge over 4".

7. Attach buckle, loop and button, or large snap.

MY FAMILY JOB TREE


GRANDFATHER
GRANDFATHER
GRANDMOTHER
GRANDMOTHER
FATHER
UNCLE
AUNT
SISTER
MOTHER
UNCLE
BROTHER
UNCLE

▨	▨	▨	^{1}P	O	S	T	M	A	N	▨	▨	▨	▨	▨
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PUBLIC SERVICES CROSSWORD PUZZLE

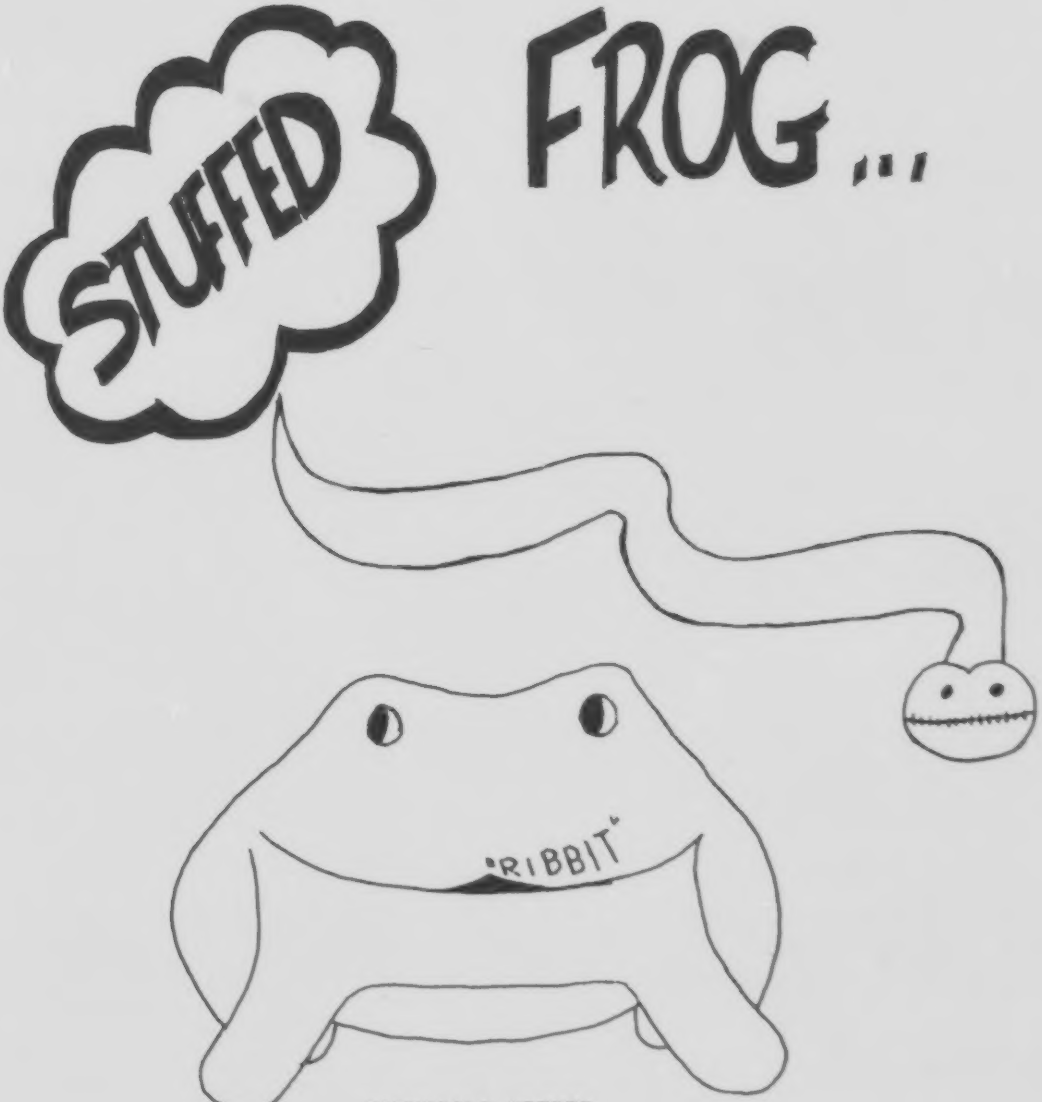
ACROSS

1. One Who Delivers Mail.
3. One Who Conducts a Class.
4. One Who Investigates (abr.)
5. One Who Conducts Traffic.
6. A Person in Charge of a Post Office.

DOWN

1. A Member of a Police Force.
2. Persons Who Work for the Government.
3. One Who Checks the Fire Department.
4. One Who Puts out Fires.
5. Administrator of a School.

STUFFED FROG...



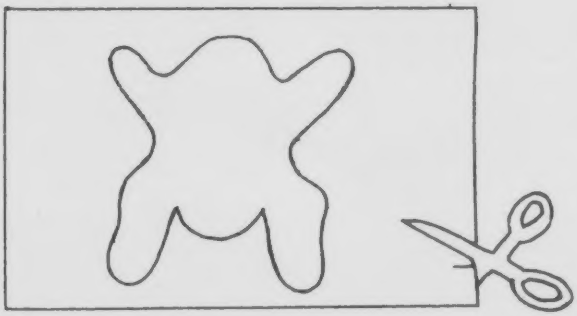
MATERIALS NEEDED

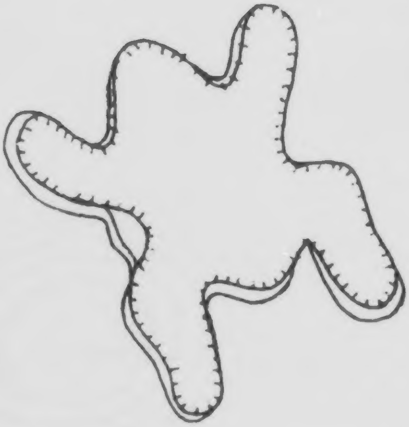
1. Frog Pattern
2. Native Fabric
3. Thread
4. Stuffing (Dried Beans, Bird Seed, Foam or Women's Hose Cut in Small Pieces)
5. Buttons for Eyes

Procedure:

1. Draw pattern on paper.

2. Cut pattern (twice) out of fabric.

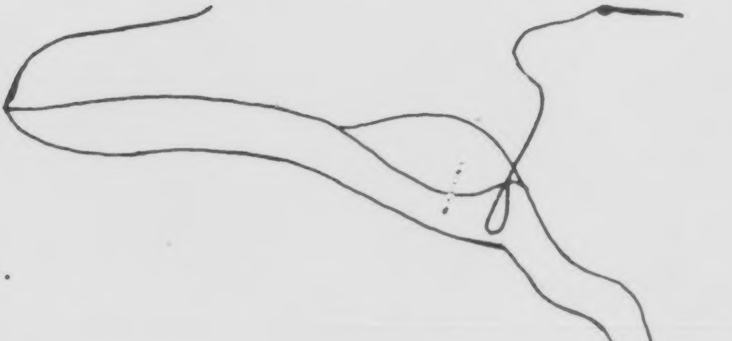




3. Lay pieces with right sides together. Sew 1/4" from edge all the way around except for a 2" opening on a straight edge. Turn right side out.

4. Stuff with selected material--Dried beans or bird seed if firmness is desired: Women's hose or foam if washing or softness is desired.

5. Stitch up opening.



6. Sew on eyes.

1 B	E	L	L	B	O	Y								2 P
E											3 H			R
A		4 B	A	R	B	E	R				A			E
U									5 M	A	I	D		S
T					6 W		7 W		A		R			S
Y					I		I		N		D			E
S					N		G		I		R			R
8 H	O	T	9 E	L	D	E	S	K	C	L	E	R	K	
O			X		O		T		U		S			
P			T		W		Y		R		S			
O			E		W		L		I		E			
P			R		A		I		S		R			
E			M		S		S		T					10 M
R			I		H		T							A
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R			O											R
			12 R	U	G	C	L	E	A	N	E	R		

PERSONAL SERVICE

ACROSS

1. A boy or man to carry luggage in a hotel

4. One who styles or cuts men's hair

5. A woman who works to clean, cook, etc., for others

8. The person at the desk in a place for traveling people, who signs them up (3 words)

11. One who takes care of a building, apartment house, etc.

12. One who uses rug shampoo

DOWN

1. The manager of a place where ladies get their hair styled (3 words)

2. One who operates a steam press in a laundry

3. A person who styles ladies' hair

5. A person who takes care of the hand; especially trimming, polishing, etc. of the fingernails

6. One who cleans clear glass

7. One who dresses the hair on a wig

9. A person who kills pests in houses

10. One who marks clothing in a laundry

WORKERS IN YOUR LIFE

ACROSS

1. Fights fires
2. Plans layouts; installs and repairs wiring and electrical fixtures
3. Prepares and cooks meals for work crews or residents and employees of institution; cuts meat; serves meals; washes dishes
4. Treats diseases and disorders of the human body
5. Serves as a member of the armed forces; performing duties under military orders
6. Instructs pupils in one or more subjects, prepares assignments, administers tests, keeps records, and maintains discipline
7. Writes original literary works such as articles, plays, poems, fiction, etc.
8. Examines patients and performs operations
9. Has ability in a particular field such as painting, sculpture, literature, music, or dancing.
10. Diagnoses and treats diseases and disorders of animals
11. Provides beauty services for customers
12. Flies airplane or helicopter
13. Instructs athletes in developing individuals and/or teams for sports competition
14. Designs and makes tailored garments
15. Types letters, reports, stencils, forms, addresses; may operate duplication machines

16. Drills and blasts earth and rock excavations to construct underground shafts and tunnels for projects; mines ore, coal, or rock

17. Connects metal parts together using heat; repairs worn or damaged metal parts

18. Assists waiter, carries dishes, cleans equipment

19. Recovers sofa, chair, or other furniture pieces

DOWN

1. Administers banking services such as loans, trust funds, safety deposit services, investment counseling, checking and savings accounts

2. Applies coats of paint, varnish, stain, etc., to decorate and protect buildings

3. Conducts religious worship services

4. Diagnoses and treats diseases, injuries, and malformations of teeth and gums

5. Opens doors, parks cars, carries luggage and greets people

6. Constructs, installs, and repairs structures and fixtures of wood

7. Conducts criminal and civil lawsuits; draws up legal documents

8. Same as 2 Down

9. Audits or examines accounts

10. Collects and analyzes facts about newsworthy events and writes or transmits these news items to others

11. Portrays role in dramatic production

12. Plans menus and diets, purchases food, and directs workers in food service program for hospital, school, or restaurant

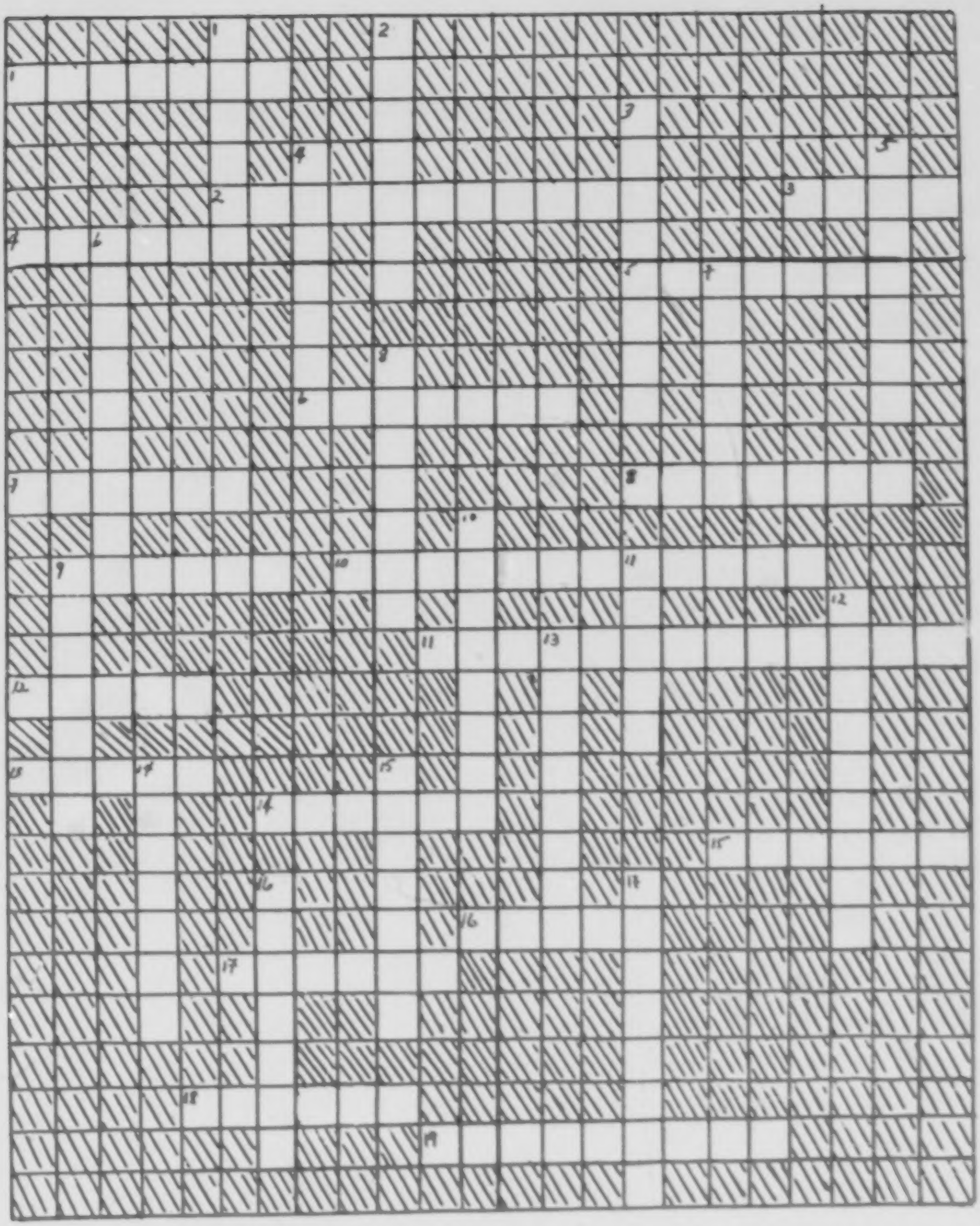
13. Plays a musical instrument or composes or arranges music

14. Receives funds from customers, counts money, records money transactions

15. Assembles, installs and repairs pipes

16. Performs chemical tests; analyzes or experiments in a laboratory

17. Makes and dispenses medications following prescriptions issued by a doctor

WORKERS IN YOUR LIFE